



# BOOK OF ABSTRACTS

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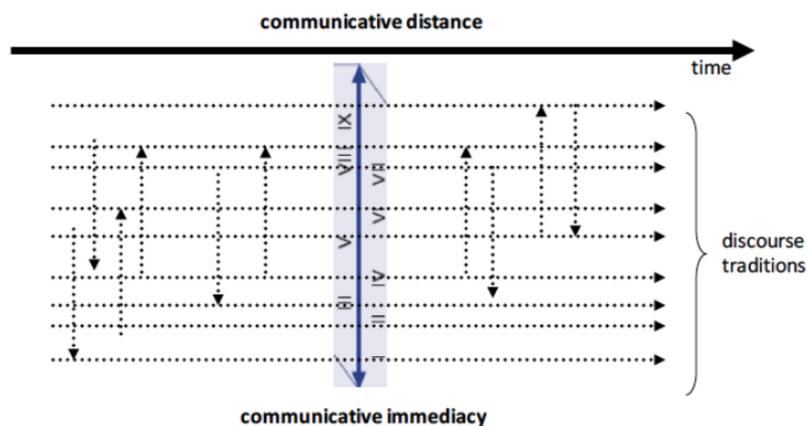
## **PLENARY SESSIONS**

## There is nothing but historical linguistics!

Johannes Kabatek  
(University of Zurich)

Over recent decades, various scientific “turns” have led to claims – more or less dogmatic in nature – that linguistics will henceforth be mainly a matter of one or another orientation (pragmatic, cognitive, generative, quantitative, etc.). Such claims are nothing new. Well over a century ago, Hermann Paul rejected any approach to linguistics other than a historical one (“Es ist eingewendet, daß es noch eine andere wissenschaftliche Betrachtung der Sprache gäbe, als die geschichtliche. Ich muss das in Abrede stellen”, Paul 1880/1909, 20). Few would subscribe to such a notion in our times; indeed, historical linguistics has become a somewhat marginal branch within the vast field of linguistic studies.

However, in this talk I will defend a “non-dogmatic” claim for an exclusively historical view of language, distinguishing different types of historicity, mainly the primary historicity of language (i.e. a particular language) as a historical object (i.e. the historicity of “synchrony”), and the secondary historicity of utterances or “texts” (what in Romance linguistics has been known as “discourse traditions”, Koch 1987) and its relevance for an adequate view of the history of a language. On this view, the diachrony of a language constitutes not a single line of evolution (e.g. an s-curve), but rather a bundle of interacting textual traditions on a continuum between “immediacy” and “distance” (Koch/Oesterreicher 2012), with innovations emerging at certain points along the continuum, plus the possibility of these spreading through the language, as in the following simplified scheme:



Discourse traditions between immediacy and distance, cf. Kabatek 2012, 92.

With examples taken mainly from the history of Spanish and Portuguese, I will address the following issues:

- (how) can we identify the textual origins of linguistic innovations?
- if we depart from a textually differentiated view of a language, can we trace the path from an innovation to its possible spread throughout a language?
- is this only a qualitative task, or is it also an issue for quantitative methods?
- what are the consequences of this view for the concept of “historical grammar”?

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## Phonotactically probable word shapes represent attractors in the evolution of sound patterns

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Keywords: word frequencies, cultural evolution, open syllable lengthening, Middle English, sound change

Speakers are sensitive to the frequencies of phonotactic patterns in the lexical inventory (Wedel 2006, Blevins 2009, Mailhammer et al. 2015). When words are phonotactically probable, they are recognised (Kelley & Tucker 2017) and learnt more easily (Storkel 2001) and produced more accurately (Goldrick & Larson 2008). Thus, we hypothesize that highly probable word shapes function as attractors in the cultural evolution of sound patterns (Blevins 2009), and favour sound changes that (re-)produce them.

We carried out two studies to test if this hypothesis correctly predicts the implementation pattern of Middle English Open Syllable Lengthening (OSL; Luick 1914-20), a sound change that lengthened short vowels. Crucially, OSL is consistently reflected only in originally disyllabic words with non-high vowels such as /a/, /o/ or /e/, if they lost their second syllables due to unstressed-vowel loss and became monosyllabic (e.g. *name*, which changed from /namə/ to /na:m/). Words that remained disyllabic (e.g. *body*) were affected only sporadically.

In the first study, we investigated the hypothesis that OSL produced monosyllables that conformed – in terms of vowel length – to the type that was most frequent among monosyllables at the time. Therefore, we predicted that vowels should have been long in the majority of pre-OSL monosyllables with non-high vowels. We used Early Middle English corpus data from the LAEME corpus (Laing 2013), which covers the relevant period (1100-1350) and is lemmatised and grammatically tagged. First, we extracted all monosyllabic nouns, verbs and adjectives that were not outputs of OSL. Then, we categorized them with regard to their vowel length and vowel height, and counted their type and token frequencies. We found that indeed the majority of pre-OSL monosyllables had long vowels when they were non-high, but not when they were high (Fig. 1). The consistent lengthening of non-high vowels – but not of high ones – in the emerging monosyllables thus increased the number of words with phonotactic patterns that had already been in the majority before.

In the second study, we tested the hypothesis that vowels of disyllables remained short because long vowels would have given them shapes less prototypical of morphologically simple disyllables. Using similar methods, we found that the majority of morphologically simple disyllables did indeed have short vowels, whereas the majority of morphologically complex disyllables had long vowels, at least in nouns and adjectives (Fig. 2). Thus, the failure of OSL to affect disyllables prevented them from assuming shapes that were far more typical of morphologically complex word forms than of simple ones.

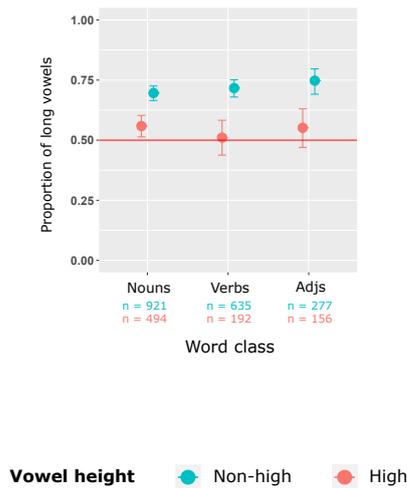


Figure 1. Proportions of monosyllabic noun, verb and adjective types with long vowels, split into words with high and non-high vowels. Error bars represent 95 % confidence intervals.

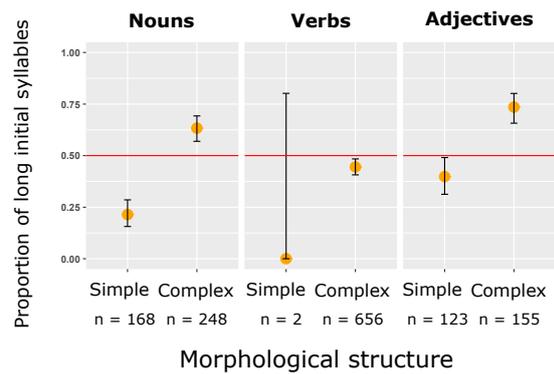


Figure 2. Proportion of simple and complex disyllabic noun, verb and adjective types with long vowels in their initial syllables. Error bars represent 95 % confidence intervals.

Overall, this suggests that learning and production biases in favour of phonotactically probable word shapes select for majority types in the cultural evolution of sound patterns. If the high probability of a sound pattern results from selection itself, however, it is difficult to disentangle the selective effects of its probability from the effects of the factors that increased its probability in the first place. This is an interesting problem for further research.

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## A typological and diachronic analysis of replica grammaticalization: Body-part reflexives in Romance-lexifier pidgins and creoles

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Keywords: replica grammaticalization, body-part reflexives, Romance-lexifier pidgins and creoles, language typology

The fact that body-part reflexives (BPRs) are widespread in Romance-lexifier pidgins, creoles and mixed languages (PCMs) of the Atlantic area, e.g. *kò* ‘body’/ *tèt* ‘head’ + pronoun in Haitian Creole (Lefebvre 1998) and pronoun + *kabésa* ‘head’ in Cape Verdean Creole (Michaelis et al. 2013) has long intrigued scholars and has usually been accounted for in terms of a West African substratum influence (Muysken & Smith 1994, Bartens 2011).

There are, however, two issues with this view. First, Indo-European-lexifier PCMs seem to have a higher-than-average tendency of developing BPRs, irrespective of their substrates and linguistic area: (i) 35/71 (49.3%) of all PCMs have BPRs (Heine 2005, Michaelis et al. 2013); (ii) 32/35 (91.4%) of these varieties have Indo-European (Germanic and Romance) lexifiers (ibid.); (iii) 13/77 (16.9%) of all languages with reflexive constructions based on the term ‘head’ are Indo-European-lexifier PCMs (Evseeva & Salaberri 2018). Contrary to point (ii), Schladt (2000) counts 89/148 (60.1%) languages whose reflexive constructions originate in body-part nouns. Second, the aforementioned view overlooks that BPRs are found in Romance-lexifier pidgins and creoles such as Zamboanga Chavacano and Malacca Creole Portuguese, which do not have a demonstrable African substrate, are surrounded by languages without BPRs and are spoken outside the Atlantic area (Michaelis et al. 2013). This suggests that the existence of such reflexives in Romance-based PCMs may be motivated not only by substrate influences, but also by the presence of BPRs in the late-Renaissance source languages (Faine 1939, Chaudenson 1973).

In view of these facts we contend that Romance-lexifier PCMs of the Indian and Pacific Oceans underwent, to varying degrees, replica grammaticalization (RG) (Heine & Kuteva 2003, 2005, and Ziegeler 2017). More specifically, we argue that the origin of RG is to be found in a written tradition which abounds in reflexive uses of the words ‘head’ and ‘body’ (1a-c) and which goes back to the Middle Ages. These structures subsist, *inter alia*, in translations of the Bible into Western European languages, which are eventually used in evangelization processes:

- (1) a. *kapite*            *nostro ponemus*            *ad*    *seruiendum*  
heads            ours    place.1PL.PRES            at    service.DAT  
‘We place ourselves at (your) service’ (Pérez 2007) (Medieval Latin)
- b. *ofereçia*            *seu*            *corpo a*            *pelejar*  
offer.3SG.PST    3SG.POSS            body to            fight.INF  
‘He offered himself to fight’ (Galves et al. 2017) (Portuguese)
- c. *ils*            *déshonorent*            *leurs*            *propres corps*  
3PL    dishonor.3PL.PRES            3PL.POSS            own.PL            bodies  
‘They dishonor themselves’ (Boulton et al. 2019) (French)

Therefore, these texts can be argued to provide the link between BPRs in medieval/Renaissance languages and the contact languages of the Indian and Pacific Ocean areas. Our claim is based on the analysis of historical corpora of six Latinate languages (Catalan, French, Occitan, Late and Medieval

Latin, Portuguese and Spanish) and text editions of three PCM language groups (Indian Ocean French, Indian Creole Portuguese and Philippine Creole Spanish).

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## **GENERAL SESSION**

## A diachronic explanation for cross-linguistic variation in the use of inverse-scope constructions

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Keywords: negation, quantifiers, scope, typology, corpus linguistics

**Overview:** This study investigates the cross-linguistic variation in the use of inverse-scope constructions such as (1), which exhibit a mismatch between word order and interpretation—negation follows the quantifier but negates the quantified proposition.

(1) *All that glitters is not gold.*  
 ≈ ‘It is not the case that all that glitters is gold.’

(2) **Definition**

An INVERSE-SCOPE CONSTRUCTION is a construction where a universal quantifier in subject position precedes clausal negation, but negation takes wide scope over the quantifier.

**Background:** There is a common claim in the semantic literature that there is a universal preference for expressing scope relations transparently—i.e., languages prefer to avoid inverse scope (see e.g., Bobaljik & Wurmbrand 2012).

However, the results of this study indicate that constructions like (1) are very common cross-linguistically, even in languages that have a scope-transparent alternative like (3). Therefore, it is not the case that languages only use inverse scope as a last resort.

(3) *Not all that glitters is gold.*  
 (4)

Moreover, in about a third of the world’s languages (e.g., Turkish), inverse scope is even the most common strategy for expressing “not all X are Y” propositions. Finally, in many languages, a surface-scope reading of sentences like (1)—which corresponds to ‘nothing that glitters is gold’—is unavailable or strongly dispreferred.

**Research questions:**

- Which languages use inverse-scope constructions and which do not?
- How to explain the cross-linguistic variation?

**Methodology:** Inverse-scope constructions are rarely described in grammars. Therefore, this study requires collecting primary cross-linguistic data. For this purpose, I use translations of the New Testament as a parallel corpus. The language sample contains 110 languages from diverse language families and linguistic areas. For 31 of these languages, historical translations are also available.

The Greek source text uses a construction similar to (3) 12 out of 14 times in the relevant verses. If a translation uses an inverse-scope construction instead, it is taken as evidence that this construction is in use in the language.

**Results:** Inverse-scope constructions are attested in 54% of the languages in the sample—more than any other strategy for expressing “not all X are Y” propositions. A language that has a construction like (3) is less likely to have an inverse-scope construction than a language that does not have such a construction (logit difference: -4.07, SE=1.243, z=3.227, p=0.001).

The following diachronic path recurs across languages:

- **Stage 1:** Inverse scope is frequently used.
- **Stage 2:** The language develops a novel scope-transparent construction. Over several centuries, the frequency of the novel construction increases, and the frequency of the inverse-scope construction decreases.
- **Stage 3:** The inverse-scope construction either falls out of use or becomes extremely rare and restricted mostly to formulaic expressions.

**Conclusion:** This study supports the claim that languages prefer to express scope relations transparently, but shows that the synchronic effect of this bias is much weaker than assumed in the literature. However, the preference for scope transparency drives systematic historical developments: languages tend to develop novel scope-transparent constructions, and these gradually replace pre-existing inverse-scope constructions.

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## Caritive morphology in Abaza: from derivation to inflection and back

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Keywords: Abaza, caritive, inflection, derivation, reanalysis

Caritive (privative, abessive) is a construction describing non-involvement of a participant in a situation and expressed as a modifier of another situation (Oskolskaya et al. 2020), e.g. English *a beardless man* or *I came without money*. In many languages caritives are expressed morphologically (Stolz et al. 2007), and caritive morphemes sometimes show peculiar combinations of properties striding the inflection-derivation divide (e.g. Hamari 2014, Grascenkov 2015). This paper discusses the behaviour of the caritive marker(s) in Abaza (ISO 630-3 abq, Northwest Caucasian, Russia) based primarily on fieldwork data collected in the villages Inzhich-Chukun and Krasnyj Vostok (Karachay-Cherkess Republic) in 2019 and 2021.

Abaza has a suffix *-da* forming caritive adjectives from nouns, e.g. *bž'ə* 'voice': *bž'ə-da* 'silent', *zŋ<sup>w</sup>a* 'illness': *zŋ<sup>w</sup>a-da* 'healthy'. This suffix does not appear to be fully productive and attaches only to common nouns without markers of definiteness or possession. Like other lexical nominals in Abaza, caritive adjectives can occur as predicates and attach verbal morphology (1).

- (1) *šə-zŋ<sup>w</sup>a-da-χa-t*  
2PL.ABS-illness-CAR-INC(AOR)-DCL  
'Thank you.' (lit. let you become healthy)

Caritive adjectives can attach the suffix *-ʔa* (originally locative but no longer productive), resulting in caritive adverbials, e.g. *bž'ə-da-ʔa* 'silently' (the vowel of the caritive suffix is often elided yielding *-d-ʔa*). Such forms are used as modifiers of verbs (2).

- (2) *a-ph<sup>w</sup>aspa*      *karandaš-d-ʔa*      *d-ʕ<sup>w</sup>-əj-ʔ*  
 DEF-girl      pencil-CAR-ADV      3SG.H.ABS-write-PRS-DCL  
 'The girl draws without a pencil'

However, the distribution of caritive adverbials in Abaza does not mirror that of caritive adjectives. First, the complex marker *-d(a).ʔa* is very productive and attaches to nouns with definiteness or possessive prefixes (*s-h<sup>w</sup>aspa-d.ʔa* 1SG.PR-knife-CAR.ADV 'without my knife'), proper names (*muradin-d.ʔa* 'without Muradin') and personal pronouns (*awat-d.ʔa* 'without them'). Second, it takes phrasal scope over demonstratives (3), adjectives and even relative clauses. None of these categories are possible input for the caritive adjectiviser *-da*.

- (3) [*arəj*      *a-h<sup>w</sup>aspa*]-*d.ʔa*  
 PROX.SG      DEF-knife-CAR.ADV  
 'without this knife'

This suggests that caritive adverbs are no longer derivatives of caritive adjectives, but have been reanalyzed as caritive case forms on a par with a handful of other Abaza oblique case markers, e.g. the instrumental *-la* (cf. the treatment of *-d.ʔa* as a case marker in Genko 1955: 118). However, caritive formations in *-d.ʔa* have also acquired some properties of their adjectival counterparts, e.g. the ability to form predicates (4) and serve as input to verbal derivational morphology (5).

- (4) *sə-nɣarta-d.ʔa-p̄*  
 1SG.ABS-work-CAR.ADV-NPST.DCL  
 'I am jobless.'
- (5) *sə-j-rə-nɣarta-d.ʔa-ʔ*  
 1SG.ABS-3SG.ERG-CAUS-work-CAR.ADV(AOR)-DCL  
 'He made me jobless.'

Thus, caritive markers *-da* and *-d.ʔa* are interchangeable at least in some contexts and probably tend to become allomorphs. Diachronically, this illustrates a rather peculiar development of a combination of derivational markers (caritive adjectiviser *-da* + adverbializer *-ʔa*) first into an inflectional marker with phrasal scope (caritive case *-dʔa*) and then encroachment of the latter into the domain of the original derivational marker (the second process has parallels in Uralic languages, Hamari 2011: 51). These processes involve the familiar mechanisms of grammaticalisation such as reanalysis and extension of lexical input and scope, but no tangible semantic change.

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### **Revisiting clitic phenomena in Mixtec**

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Keywords: clitics, morphology-syntax division, wordhood diagnostics, Mixtec languages, San Martín Duraznos Mixtec

In this study we provide the first description of clitic phenomena in Duraznos Mixtec (DM) (Otomanguan; Oaxaca). We argue that the clitic data in DM do not support a two-way classification of clitics nor a global distinction between morphology and syntax in this language.

Pike (1945) proposed that there was no global morphology-syntax distinction in Chalcatongo Mixtec (CM), based on the observation that many bound forms in CM can be synchronically analyzed as phonological reductions of full words. Furthermore, there is distributional overlap between bound forms that are not reductions and bound forms in general, so that all bound forms could be analyzed as underlyingly derived from full words. Macaulay (1987a, b) argued against this, claiming it missed important distributional, semantic, and phonological differences between morphemes and constructions in the grammar of CM. She posited that a distinction between affixes, clitics, and words is motivated and that clitics can be classified into two types ('simple clitics' and 'special clitics/phrasal affixes'), following Zwicky (1977) (see also Anderson 1992, 2005). She did not consider the possibility that wordhood diagnostics support more categories than just those from Zwicky.

Contrary to Macaulay's (1987a, b) analysis of CM, we find that clitics in DM do not support this classification. Data for the study come from original fieldwork conducted between 2018-2020 in Oxnard (California, USA) with diaspora speakers and in the village of origin San Martín Duraznos (Oaxaca, Mexico), supplemented by native speaker judgements by one of the co-authors.

Considering a wider array of wordhood diagnostics (Spencer & Luís 2012a, b; Haspelmath 2011, 2015), we show that there are more classes of morphemes/constructs. A detailed assessment of clitics in the language based on 8 diagnostics reveals not two, but as many as nine or ten classes – depending on whether one considers allomorphy or not. Table 1 displays the results on just 16 morphemes in DM.

An illustrative example of one of the problems with Macaulay's analysis applied to DM, comes from adverbials which do not clearly partition into words and clitics according to the diagnostics. For example, *ntxìvà'a* INTENSIFIER, *ti~tiki* AGAIN and *va* ADDITIVE are clitic-like in that they have a fixed order with respect to their base. However, *ntxìvà'a* INTENS cannot be interrupted from the verb base, whereas *va* ADD and *ti~tiki* AGAIN can (cf. 1 and 2). These morphemes also vary in terms of their selectional properties, cf. Table 1. Due to the distributional and diagnostic similarities that adverbials share with other clitics, one cannot simply argue that they are words. Furthermore, even subject clitics vary according to whether they display irregular allomorphy or not. Contrary to Macaulay (1987a, 1987b), there is no non-arbitrary way of cutting clitic phenomena into morphological and syntactic types, undermining her argument against Pike's (1945) point about problems in assuming a morphology-syntax division in all languages.

1.
  - a) *chíntxeé ntxìvà'-ì yó'ó*  
IMPF.help INTENS-1SG 2SG.NHON  
'I'm helping you a lot.'
  - b) \**chíntxeé-ì ntxìvà'a yó'ó*
  - c) \**chíntxeé-ì yó'ó ntxìvà'a*
  - d) \**ntxìvà'a chíntxeé-ì yó'ó*
  
2.
  - a) *kusi-va-ti-ó*  
IRR.sleep-ADD-again-1PL.INCL
  - b) *kusi tiki-va-ó*  
IRR.sleep again-ADD-1PL.INCL  
both: 'We'll go to sleep again.'
  - c) \**kusi-ti-va-ó*
  - d) \**kusi-va-ó tiki*

Table 1. Some clitics and wordhood diagnostics in San Martín Duraznos Mixtec

Form	GLOSS	ORDER WITH RESPECT TO HOST	IRREGULAR ALLOMORPHY	INTERRUPTABILITY (BY FREE FORM)	INTERRUPTABILITY (BY BOUND FORM)	FREE (ELLIPTICAL) OCCURRENCE	PROJECTS STRESS DOMAIN	CATEGORY COMBINATION	OCCURS WITH FOSSILIZED	CLASS
<i>ì</i>	1SG	post	X	✓	✓	X	X	V, N	X	1
<i>ò</i>	1PL.INCL	post	✓	✓	✓	X	X	V, N	X	1a
<i>ntì</i>	1PL.EXCL	post	✓	✓	✓	X	X	V, N	X	1a
<i>txì</i>	CLF. ANIM	pre	✓	✓	X	X	X	N, A	✓	2
<i>tù</i>	CLF. PLANT	pre	✓	✓	X	X	X	N, A	✓	2
<i>kV-</i>	VBLZ	pre	✓	X	X	X	X	V, N, A	✓	3
<i>nti/nta</i>	ITER	pre	✓	X	X	X	X	V, N, A	✓	3

<i>sá</i>	CAUS	pre	X	X	✓	X	X	V, N, A	X	4
<i>nì</i>	MODAL	pre	X	X	X	X	X	V	X	5
<i>na</i>	MODAL	pre	X	X	X	X	X	V	X	5
<i>kòó</i>	NEG.REAL	pre	X	X	✓	✓	✓	V, N, A	✓	6
<i>u/o ~ i</i>	NEG.IRR	pre	✓	X	✓	X	X	V, A	✓	7
<i>va</i>	ADD	post	X	✓	✓	X	X	V, N, A, ADV	✓	8
<i>tì/tiki</i>	AGAIN	post	✓	✓	✓	X/✓	X/✓	V, A	X	8
<i>ntxivà'a</i>	INTENS	post	X	X	X	✓	✓	V, A	✓	9

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## Adaptive analogy in Word-and-Paradigm morphology: the case of Seri (isolate) verbs

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Keywords: analogy, inflection, paradigms, verbal number, Seri

**Introduction.** Implementations of abstractive (or *Word and Paradigm*) approaches to morphology have concentrated on the problems created by formal uncertainty: allomorphy raises the question of which formative to use, while syncretism raises the question of how to interpret a form. Either way, the set of morphosyntactic values underlying the forms is generally taken as a given, so the analysis revolves entirely around the forms. That presupposes a fixed paradigm of morphosyntactic values in order to have a reliable anchor for analogical deductions. We look here at a system where that may not be the case.

**Problem.** The two Seri verbs in Table 1 mark both subject number and verbal number using suffixes. These suffixes exhibit allomorphy: the plural neutral suffix *-coj* in A corresponds to *-c* in B. But in addition, individual suffixes realise different cells for different lexemes: *-c* is SG MULT in A, but PL NEUT in B, and the suffix *-coj* is PL NEUT in A, but PL MULT in B. The use of *-c* for SG MULT and *-coj* for PL can readily be deduced by analogy with other verbs where *-c* and *-coj* are used with the same meanings. Likewise the use of *-c* for PL and *-coj* for PL MULT can be deduced from other verbs where these forms have the same function. But these two sets of analogical deductions are unrelated to each other. Under a conventional WP analysis, their lack of parallelism should block analogical deduction. Yet speakers not only learn the system but productively exploit it, expanding the paradigm in order to realize additional morphosyntactic values, showing that analogical deduction is possible.

Table 1

	SG NEUT	SG MULT	PL NEUT	PL MULT	
A	itanamj	itanaml-c	itanaml-coj	itanaml-cam	‘hurry to do something carelessly’
B	tmaasij	tmaasil-im	tmaasil-c	tmaasil-coj	‘roll’

**Generalisation.** While the formal relationship between *-c* and *-coj* can be straightforwardly extended by analogy, the morphosyntactic relationship between the cells they occupy is different for each verb. This situation plays out repeatedly in Seri verb paradigms, but the distribution of suffixes is not random: if the morphosyntactic paradigm is arranged in a row from ‘least plural’ to ‘most plural’, as in Table 1, the formatives can be arranged as an implicational hierarchy according to whether they occur towards the left or right along this axis (Baerman 2016).

**Proposal.** We claim that the implicational hierarchy of Baerman (2016) can be understood to be an emergent property of the lexicon (whose origin is, we suggest, diachronic), not explicitly encoded anywhere but recoverable for analogical deductions. We offer a novel computational implementation of WP morphology that allows these morphological generalizations to be extracted and extended. This formalizes the idea that speakers recognize purely contrastive values of the formatives, which is demonstrated by the way they innovate new morphosyntactic values based on an established inventory of forms.

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## Transparent relative clauses as predicative free relatives: evidence from Portuguese

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1. Among free relatives, there is a group that remains less studied, transparent free relatives (TFR), as (1):

- (1)(a) Havia o que parecia ser um avião na autoestrada  
'There was what seemed to be a plane in the highway'.

The goal of the presentation is to contribute to their analysis.

2. TFR show some interesting properties that, at least at first glance, make them distinct from standard FRs:

(i) The constituent "pivot" following the predicative expression is felt as belonging to the upper sentence, (2):

- (2) (a) Havia [o que parecia ser um avião na autoestrada]  
'There was what seemed to be an airplane on the highway'.

- (b) Havia [um avião] na autoestrada.  
'There was an airplane on the highway'.

(ii) The interpretation of the TFR is always indefinite, differing from the standard ones, which may have a definite reading (3) or universal, as in (4):

- (3) Conheço quem chegou  
'I know who arrived'.

- (4) Detesto quem diz mentiras.  
'I hate whoever tells lies'

(iii) Related to this property, they are associated with a modal discursive operator (*parecer* 'seem') (Ferreira 2007) or intensional modifiers, in the sense that they are property modifiers (*alleged, presumed, allegedly, presumably*) (Riemsdijk 2007: 364):

- (5) Serviram-me o que alegadamente se poderia chamar um bife.  
'They served what I might call a steak'.

(iv) Only a wh constituent as *o que* (*what / ce que*) may be used, even for a humans, what is related to the predicative nature of this type of FR. (Riemsdijk 2007: 364, Ferreira 2007: 130):

- (6) Ela contactou com o que eu tomei por um polícia para ficar de noite na casa.

'She contacted with what I had taken to be a policeman to stay at the house during the night'.

Which analysis shall we propose for this type of construction? Ferreira (2007), for Portuguese, suggests that they are a type of free relative, but the details of her analysis are not elaborated.

3. Different analyses have been proposed for TFR. Wilder (1999) and Schelfhout, Coppen & Oostdijk (2003) argue that a FTR is the result of an insertion followed by a backward deletion (7):

- (7) (a) O João comprou um banjo.

'John bought a banjo'

- (b) O João comprou [o que parece ser] um banjo.

'John brought [what he took to be a banjo] a banjo'

Ferreira (2007), although sensitive to the "accessory" character of this type of construction and the closeness to parenthetical structures (8), does not argue for this type of analysis.

- (8) Havia, digamos, um avião na autoestrada.

'There was, let us say, a plane on the highway'.

- (9) Havia, aparentemente, um avião na auto-estrada.

'There was, apparently, a plane on the highway.'

Another analysis is "grafting analysis" (Riemsdijk 2007). For this author, in free relatives and in TFR in particular the wh morpheme is shared by the matrix clause and the free relative: *o que* 'what' in the example (10) belongs simultaneously to the highest sentence and to the lowest sentence:

- (10) O João comeu o que a Maria cozinhou.

'(John ate what Mary cooked'.



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## **Necessity modals on Singaporean blogs: A contrastive and comparative analysis**

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Keywords: modality; Singapore English; corpus linguistics; contact grammaticalization; language contact.

The English spoken in Singapore (SgE) has witnessed a great degree of grammatical restructuring, mainly through the influence of the adstrate languages spoken on the island, i.e. Mandarin Chinese, Malay and Tamil. The modal system of SgE has also seen a distinctive development compared to inner circle varieties of English. At least two theories have attempted to explain SgE modality: the substratist and the grammaticalization theories. In the first, called “convergence-to-substratum” and proposed by Bao’s (2010) study on *must*, it is claimed that lexical or grammatical features from the lexifier language (English) converge to the equivalent features in the substratum by taking their functions (Bao 2015: 163). The restriction to deontic use of *must* in SgE is thus explained through the substratum influence of the Mandarin Chinese deontic particle *bixu*, whose meaning has not yet grammaticalized to epistemic uses. The second explanation investigates modality through the theories of contact grammaticalization (Heine and Kuteva 2003, 2005). In her study on *will* in SgE, Ziegeler (2014) claims that some over-generalised uses of modal verbs may be explained through a recapitulation of earlier diachronic stages. For example, the relatively frequent habitual use of *will* in SgE today is seen as a replication of the initial stages of habitual meaning of *will* in Old and Middle English times.

While Bao’s (2010) study gives much attention to *must*, other members of the necessity paradigm (*have to/have got to* and the phonologically reduced *hafta/gotta*) are not taken into account. The aim of the present study is to analyse these semi-modals to shed some light on the reasons why they are also affected by a restriction to deontic uses (Loureiro-Porto 2019). Firstly, it is claimed that their different grammatical functions should be more closely investigated in the analysis, as the modals of the necessity paradigm are not always interchangeable. Secondly, next to the substratist explanation, Ziegeler’s contact grammaticalization theory is re-examined to see if it might also account for such restrictions. It is found that SgE *must* is more often used dynamically (44.13%) than deontically (37.15%). At the same time, in BrE such dynamic uses are rarer (12.94%) today, compared to Middle English times, when dynamic uses preceded deontic ones (Gregersen 2020).

The study is carried out comparing the necessity paradigm of BrE and SgE on ICE. Data from contemporary blogs are also examined for the first time, by analysing *The Flowerpod Corpus* (compiled in 2007-2009) and a present-day corpus of the same size, compiled with new data from the Singaporean *Hardwarezone* blog. Dealing with reviews and recommendations on new technologies, it is clear that necessity modals are quite productive in such environments. The uses of necessity modals in *The Hardwarezone Corpus* and in *The Flowerpod Corpus* are finally compared to test whether their uses and functions on the internet have changed in the space of a little over ten years.

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## *Situative constructions in European languages*

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Keywords: locational predication, areal typology, SAE, morphosyntax, reflexive

In my paper, I discuss what I call *situative* constructions in SAE (Haspelmath 1998, 2008). *Situatives* predicate where a referent *situates* itself: this is achieved through different morphosyntactic strategies. The verb, despite its complex semantics, often only conveys the meaning that something is (situated) there, thus behaving like the verb ‘to be’.

- (1) a. Neapolitan (Romance) – [pers.knowl.]  
*u me'k:a:nikə sə 'trɔ:və a'b:af: a 'vijə*  
 the mechanic REFL.3SG **find** down the street  
 ‘The mechanic’s workshop is (located) down the street.’
- b. Polish (West Slavic) – [Glosbe]  
*Znajduje-my się na wod-ach Floryd-y*  
**find-1PL** REFL on water-LOC Florida-GEN  
 ‘We are in Florida waters.’
- c. Estonian (Finnic) – [etTenTen – Web 2019]  
*Mets-a all leid-u-b kukeseen-i ja*  
 forest-GEN under **find-REFL-3SG** chanterelle-PTV.PL and  
*metsamaasik-aid*  
 wild.strawberry-PTV.PL

‘There are chanterelles and wild strawberries on the forest floor.’

As seen in (1), situatives are semantically non-prototypical locational constructions. They may follow the information structural patterns of prototypical locational predication, which involves, in European languages, a *Figure* in thematic position, located in a rhematic *Ground* or in motion towards it (Creissels 2009). In Finnic (1c), situatives can overlap with existential constructions (Hakanen 1972) and feature partitive subject-like e-NPs (Huomo & Helasvuo 2015). A detailed quantitative study about the Finnish situative verb *löytyä* ‘to be found’ and its copula-like use has been conducted by Basile and Ivaska (forthcoming). In most European languages, however, there is no correspondence with existential/inverse locational predication (Creissels 2014, 2019) or other non-prototypical locational constructions, like presentationals (Gast & Haas 2011). Situatives are characterized by their predicate, for which I have defined three basic criteria to follow:

- I. it is never a copula;
- II. it has complex, non-transparent semantics, and yet the same meaning as a locational copula on a construction level;
- III. it is morphologically marked.

The predicate is usually a reflexive/mediopassive form of the verb ‘to find’. Reflexivizers often have coexpression patterns (Haspelmath 2019, Genušienė 1987), i.e. they can be used for several functions, like reciprocal or impersonal (Italian *si*). This can lead to various semantical interpretations of situatives.

- (2) a. German (West Germanic) – [Glosbe]  
*Der Bahnhof befindetsich zwischen diesen beiden Städten*  
 the station CAUS.find.3SG REFL between these two cities  
 ‘The station is located between these two cities.’
- b. Modern Greek – [Glosbe]  
*Agapití mitéra, vrísk-o-mai anámesa se lík-ous*  
 dear.VOC mother.VOC find-1SG-MPAS between to wolf-ACC.PL  
 ‘Dear mother, I find myself among wolves.’
- c. Spanish (Romance) – [Glosbe]  
*El hotel se encuentr-a en una zona tranquila*  
 the hotel REFL find-3SG in a area calm  
 ‘The hotel is located in a calm area.’

I defined the semantic roles of FINDER (the hypothetical agent causing the aspectual process preceding the finding) and FOUND (the patient of the process). Three types follow. In (2a), there is no correspondence between FOUND and FINDER, which is external; in (2b), the FOUND is coreferential with the FINDER; in (2c), either there is no coreference between FOUND and FINDER or the construction may be impersonal (coexpression pattern).

The study sketches an areal typology. Material is gathered from web corpora and through elicitation from native speakers.

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## **Constructionalization of discourse functions in the history of Italian: A corpus study of *infatti***

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Keywords: constructionalization, grammaticalization, discourse markers, Italian, *infatti*

In this contribution, we present a diachronic investigation of the frequent Italian discourse marker *infatti*, so far unexplored. Stemming from the univerbation and functional recategorization of the lexical adverbial *in fatti* (in deed.PL), it nowadays serves connective functions related to justification and pragmatic functions related to confirmation (Rossari 1997; Bruti 1999). Existing studies have focussed on similar forms in other languages, both synchronically (e.g. Danjou-Flaux 1980, Charolles/Fagard 2012 on French *en fait*, *en effet*) and diachronically, in terms of grammaticalization (e.g. Traugott 1995, Schwenter/Traugott 2000 on English *in fact*, *indeed*; Fanego 2010 on Spanish *de hecho*; Simon-Vandenberg/Willems 2011).

While it has become increasingly clear that entire constructions, i.e., pairings of form and function, rather than single lexical items undergo changes (Traugott 2003, Bergs/Diewald 2008), the implications of a constructional view for the emergence of discourse markers have been less considered. Drawing on the proposal that constructions can be extended to model the textual and dialogic structures in which specific markers occur (Fried/Östman 2005, Masini/Pietrandrea 2010; in diachrony Fried 2009, Lewis 2014), we search for the patterns hosting *in fatti* and later *infatti*, and pinpoint their role in the acquisition of new, discourse functions.

In this study, 7576 occurrences of the forms in texts from Old to Present-day Italian were retrieved from the OVI, Bibit, DiaCoris and Volip corpora. An annotation of syntactic, semantic and distributional parameters regarding the forms and their contexts was performed on a sample of 1066 occurrences. Their diachronic path is reconstructed.

Stage 0	Stage I	Stage II	Stage III	Stage IV
Prepositional phrase	Prepositional phrase in lists	Sentence adverb	Discourse connective	Pragmatic marker
13th–15th c.	13th–16th c.	16th–17th c.	16th– c.	20th– c.

We argue that a gradual change sets out as the distribution of *in fatti* becomes constrained within lists (stage I, e.g. [*in detti e in fatti* ‘in words and deeds’]). The form is embedded in a specific slot that shifts over time across various transitional patterns (=bridging contexts). It takes on new functions as it progressively moves towards a new slot within higher-level patterns (stages II-III), marked by discourse-relational, argumentative and finally interactional meanings (stage IV). Using corpus data, we illustrate the successive micro-steps. We further argue that the relation between the forms under investigation and their contexts at various stages is best captured by a set of constructions at different levels of complexity and schematicity, ranging in diachrony from the phrasal to the clausal up to the supra-clausal level, from fully instantiated ones to maximally abstract structures of textual organization (e.g. [P<sub>CONNECTIVE</sub> Q]). Overall, we identify six types of *infatti*-constructions and map their synchronic and diachronic relations in a network.

From a theoretical standpoint, the quantitative distribution of the types in our corpus complies with an (inter)subjectification cline (Traugott/Dasher 2002) and with a multiple-stage model of grammaticalization (Mauri/Giacalone Ramat 2012). Crucially, our account is also compatible with a constructionalization scenario (Traugott/Trousdale 2013) and brings evidence for the definition of discourse-level constructions as possible *loci* of change.

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## On the role of emotion in lexical reproduction

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Keywords: emotions, arousal, concreteness, valence, English lexicon, language change

This paper investigates diachronic long-term effects of emotional properties in lexical dynamics. Emotional properties have been shown to influence lexical processing. For example, Kauschke et al. show in an exhaustive meta study that words with neutral valence are on average processed more slowly than positive (and also negative) words. Similarly, Ponari et al. (2016) and Pauligk et al. (2019) demonstrate a processing advantage of non-neutral words, but they also show that the effect of valence is modulated by concreteness. To make the picture even more complicated, Kuperman et al. (2014) find a negative relationship between arousal and word recognition.

Since even relatively weak cognitive biases like this can accumulate to yield strong tendencies on a larger time scale, we ask ourselves the following questions: (i) what are the effects of valence, concreteness, and arousal, respectively, on the diachronic reproductive success of words and (ii) do these effects mirror those observed in lexical processing?

To address these questions, we operationalize reproductive success in two ways: first, diachronic growth, i.e., increase or decrease in usage frequency; second, degree of spread, via prevalence in the speaker population. For a sample of several thousand English words, growth was estimated based on the Corpus of Historical American English (Davies 2010), while spread was derived from crowdsourced lexical data (Kuperman et al. 2012). Semantic change was controlled for through analyzing diachronic shifts in the corresponding word vectors (Kutuzov et al. 2017). The generated word lists were subsequently enriched with valence, concreteness, and arousal ratings taken from Warriner et al. (2013) and Brysbaert et al. (2014).

Effects of emotional properties on both measures of reproductive success were analyzed by means of generalized additive models, thereby also taking three-way interactions among concreteness, valence, and arousal into account. It is shown (Figure 1) that our analysis supports a non-neutral bias regarding valence and a slightly positive effect of concreteness on reproductive success, as expected given known effects on lexical processing. Arousal, however, exerts a strongly positive effect on reproductive success, quite in contrast with results on lexical recognition by Kuperman et al. (2014). A post-hoc analysis reveals that successful words mostly belong to the word fields ‘food’ (e.g. *dessert*, *popcorn*), ‘money’ (e.g. *cash*, *dollar*) and ‘family’ (e.g. *girl*, *breast*) which suggests that potential negative effects of arousal on lexical processing do not extend to the core vocabulary. We discuss this hypothesis and highlight the role of arousing speech in social interactions.

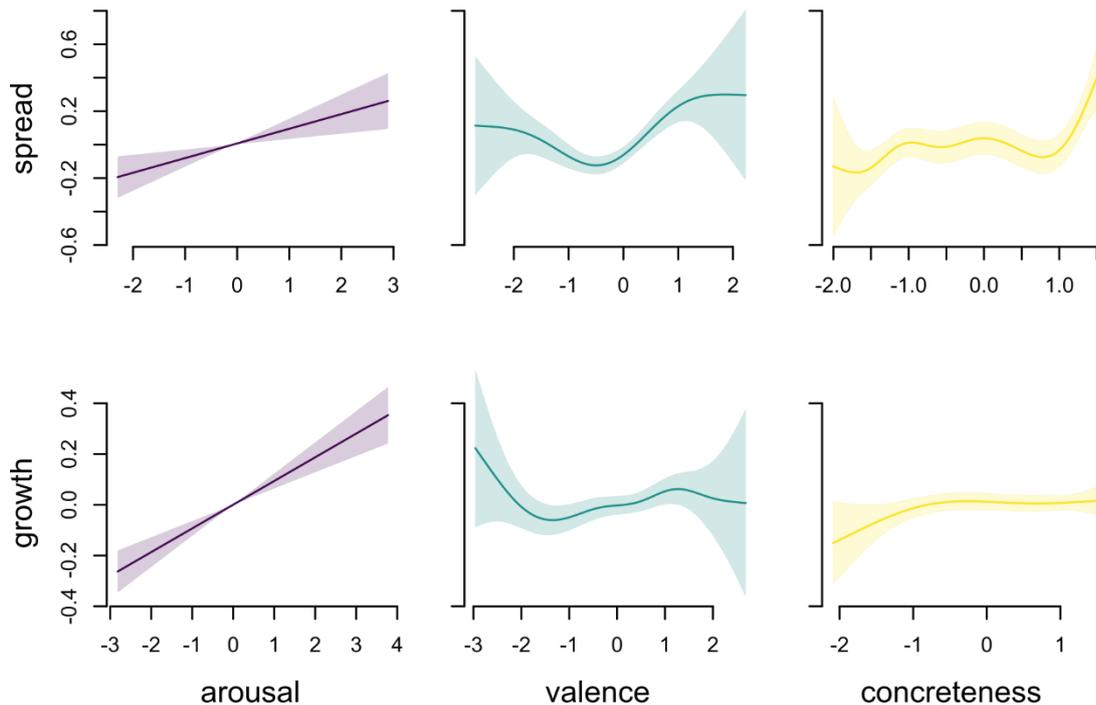


Figure 1. Effects of emotional properties on diachronic growth and lexical spread (z-transformed).

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## Associated motion in P'urhepecha: Synchronic and diachronic perspectives

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Keywords: P'urhepecha, associated motion, directional suffixes, grammaticalisation, language change



historically is found only as *-pa-nt'a*, affixed to other roots. However, there is no modern or historical attestation of an independent verb *púñkwani*, only the very close *junkwani* (historically *hunguani*) ‘return, come’.

Despite its absence in the literature to date, the examples above show that the category of AM is attested from the earliest written sources of P’urhepecha to the present-day, and can be encoded both in lexical verbs and suffixes. We will also address the connection between these two categories in order to better understand the development of this semantic domain, as well as the language more broadly.

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### Abbreviations used

- 1 1st person
- 2 2nd person
- AOR aorist
- ASS assertive
- BACK motion returning to source
- CENTRIF centrifugal motion
- CENTRIP centripetal motion
- S subject

From Standard Marker to Adaptor: the case of Vedic *iva*

Erica Biagetti  
<not updated>

## A non-elliptical analysis of polar verbless clauses

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Keywords: pseudostripping, polar response particles, deep vs. surface anaphora, Romanian

We focus on polar verbless clauses (PVCs, or pseudostripping, cf. Depiante 2000) in Romanian, which make use of polar response particles such as *da* ‘yes’ and *nu* ‘no’, occurring in dialogic contexts as short answers (1a), as well as in monologic contexts, in so-called contrastive coordinations (1b).

- (1) a. –Vor veni prietenii tăi la petrecere? –**Ion da**, dar **Maria nu**.  
‘–Will your friends come to the party? –Ion yes, but Maria no.’  
b. Ion va veni la petrecere, dar **Maria nu**.  
‘Ion will come to the party, but Maria no.’

Based on empirical evidence, we show that one has to distinguish between PVCs and other related constructions (such as stripping or gapping): PVCs behave rather as deep anaphora, unlike stripping or gapping which come closer to surface anaphora (see the influential dichotomy proposed by Hankamer & Sag 1976). Deep anaphora do not result from an ellipsis process, whereas surface anaphora result from an ellipsis mechanism. We show that, unlike elliptical clauses such as stripping or gapping, PVCs do not necessarily require a linguistic antecedent; therefore, they may have pragmatic antecedents in so-called exophoric uses. Moreover, we show that adverbial proforms in PVCs are not sensitive to the form of their antecedents: they may substitute not only finite clauses or verbal phrases, but also other kinds of phrases, provided that they have a predicative use; the form that their antecedent may have is therefore highly underspecified. Therefore, we adopt a proform analysis of PVCs (Krifka 2013), rather than an elliptical one (Kramer & Rawlins 2009, Holmberg 2015). Polar response particles are not the remnant of ellipsis, but rather adverbial proforms, behaving as propositional anaphors: they partly receive their interpretation through a contextually given antecedent (like an anaphorical pronoun). PVCs as a whole are therefore clauses with a non-verbal predicative head. In the case at stake, the predicative head is an adverbial phrase containing a propositional adverb such as *da* or *nu* in Romanian. PVCs can contain only the predicative head (the adverbial phrase itself), or two phrases, the predicative adverbial phrase being preceded by a topic phrase (hanging topic, cf. Krifka 2013).

A particular attention will be given to embedded PVCs, in order to show that embedding is constrained by semantics, namely by the semantic type of the embedding predicate, as is the case for other related constructions (stripping or gapping). This was first noticed by de Cuba & MacDonald (2013) for Spanish, who observe that embedding is possible with non-factive verbs, but impossible with factive verbs. In this paper, we show, based on attested corpus data, that a semantic tripartition (non-factive vs. semifactive vs. true factive verbs) seems to be a better fit to account for our data. From a theoretical perspective, contrary to Weir (2014), we do not derive the contrast between non-factive and factive verbs from their different syntactic structures, but rather from their semantic and discursive properties (Hooper 1975, Hooper & Thompson 1973, Farkas 2003). Throughout the paper, Romanian data will be analyzed in a Romance perspective (Spanish, Italian, French).

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## Denominal Verbs and Creativity: An Experimental Approach

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**Keywords:** denominal verbs, literal meaning, figurative meaning, root, novel words

The current paper investigates the meaning of denominal verbs through an experiment testing how native Romanian native adult speakers understand novel (non-existent) denominal verbs created from existing nouns, such as *a cireși* ‘to cherry’ or *a vulpi* ‘to fox’. We show that the formation of novel denominal words is modulated to a great extent by cognitive biases for animacy and world-knowledge regarding typical actions.

According to Lexical syntax (Hale & Keyser 2002), the meaning of denominals can be captured by means of syntactic rules such as Incorporation/ Conflation (*dance*= DO *dance*), whereas, according to Distributed Morphology (Halle & Marantz 1993, Marantz 1997, Borer 2014, a.o), denominals are derived from an underspecified root. In addition, the Pragmatic account (Kiparsky 1997) argues that the internal structure of denominal verbs cannot be fully captured syntactically. Rather, such verbs observe a Canonical Use Principle (If an action is named after a thing, it involves a canonical use of that thing).

To test the role of Canonical Use Principle in denominal verb formation, in the current experiment, we gave 40 Romanian native speakers 16 possible, but nonexistent denominal verbs, asking them to provide a sentence and a paraphrase for each. The verbs belonged to four classes derived from nouns designating animals, human roles, plants/vegetables, objects/places (Table 1). Interestingly, the results reveal a general tendency to refer to animate (preferably human) subjects (Table 2), as well as a preference for intransitive frames, except for the ‘transitive’ human roles class (Table 3). Importantly, the answers reflect typical actions/states/processes typical for the entity. All verb classes exhibit variation between literal interpretations (where there is interaction with the actual entities) and figurative interpretations (where no actual interaction is involved, but the subject of the utterance has some similarity to the entity either in terms of appearance/behaviour) (Tables 4, 5). For instance, the verb *to cherry* expresses mostly the canonical actions of picking or eating cherries (‘to pick/eat cherries’), but it can also express the state of becoming cherry-red in the cheeks (‘to become

like a cherry’). The object class is mostly literal, since people often interact with objects. In contrast, the animal verb class is almost exclusively figurative since people rarely interact with (the) animals (mentioned) but often behave like them (*to fox*= ‘to behave like a fox’). The human class is both literal and figurative, since people can either act in accordance with certain function or as if they had it.

Unlike Kelly (1998), who argued that literal denominals are derived syntactically, whereas figurative denominals are derived pragmatically, we argue that the same verb can have both literal and figurative interpretations, and that literal readings are derived by composing a verbal element with a noun, whereas figurative readings are derived by composing a verbal element (either BECOME or ACT) with a root (Figure 1). However, syntactic rules are not enough to explain the multitude of verbal meanings available, and a more comprehensive explanation has to (also) include cognitive biases for Animacy and world-knowledge about canonical actions.

Table 1: Non-existent verbs derived from existent nouns used in the experiment

Denominal class	Thematic role	Verbs
object class (non-animate objects & places)	Instrument, Location	<i>a chitări/to guitar, a mașini/to car, a râui/to river, a strada/to street</i>
plant class (fruits, vegetables)	Theme/Locatum	<i>a cireși/to cherry, a lămâi/to lemon, a cepui/to onion, a dovleci/to pumpkin</i>
animal class	Theme/Manner/Result	<i>a vulpi/ to fox, a pinguini/to penguin, a elefânți/to elephant, a iepuri/to bunny</i>
human class	Theme/Manner/Result	<i>a dentisti/to dentist, a mecanici/to mechanic, a bunici (a mămăi)/to grandma, a mătuși/to aunt</i>

Table 2: Animate subjects per denominal class

Denominals	Animate subject	Inanimate subject
object class	90.625%	9.375%
plant class	97.5%	2.5%
animal class	99.375%	0.625%
human class	100%	0%

Table 3: Transitivity per denominal class

Denominals	Transitive	Intransitive
object class	30%	70%
plant class	40%	60%
animal class	27.5%	72.5%
human class	71.75%	28.25%

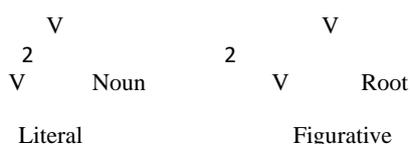
Table 4: Sentence answers and paraphrases offered by participants per denominal classes and interpretations

Denominal class		Sentence answers	Paraphrases
object class	Lit	<i>El chitărește frumos.</i> ‘He guitars beautifully.’	<i>a cânta la chitară</i> ‘to play the guitar’
	Fig	<i>El a chitarit tot timpul.</i> ‘He guitared all the time.’	<i>a se preface că cântă la chitară</i> ‘to pretend to play the guitar’
plant class	Lit	<i>Eu cireșesc în grădină.</i> ‘I am cherrying in the garden’.	<i>a culege cireșe</i> ‘to pick cherries’
	Fig	<i>A cireșit la auzul spuselor lui.</i> ‘She cherried at hearing his words.’	<i>a se îmbujora, a se face roșu ca cireșa</i> ‘to become red in the cheeks, to beome red like a cherry’
animal class	Lit	<i>Vânătorul și soția sa au vulpît creatura care le măcelărise păsările din coteț.</i> The hunter and his wife foxed the creature which had butchered the birds from the coop.	<i>a juپui o vulpe</i> ‘to flay a fox’
	Fig	<i>A vulpît-o cu niște vorbe frumoase.</i> ‘He foxed her with some beautiful words.’	<i>a păcăli ca o vulpe</i> ‘to trick like a fox’
human class	Lit	<i>El mecaniceste și câștigă mult.</i> ‘He mechanics and earns a lot of money.’	<i>a lucra ca mecanic</i> ‘to work as a mechanic’
	Fig	<i>Își mecanicește singur mașina când se strică.</i> ‘He mechanics his own car when it breaks.’	<i>a repara ca un mecanic</i> ‘to fix like a mechanic’

Table 5: Animate subjects per denominal class

Denominal class	Figurative	Literal
object class	22.5%	77.5%
plant class	30.65%	69.375%
animal class	99.375%	0.625%
human class	50%	50%

Figure 1: Representation literal &amp; figurative readings



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## Accounting for the Asia Minor Greek dialectal variation: A comparative dialectometric approach

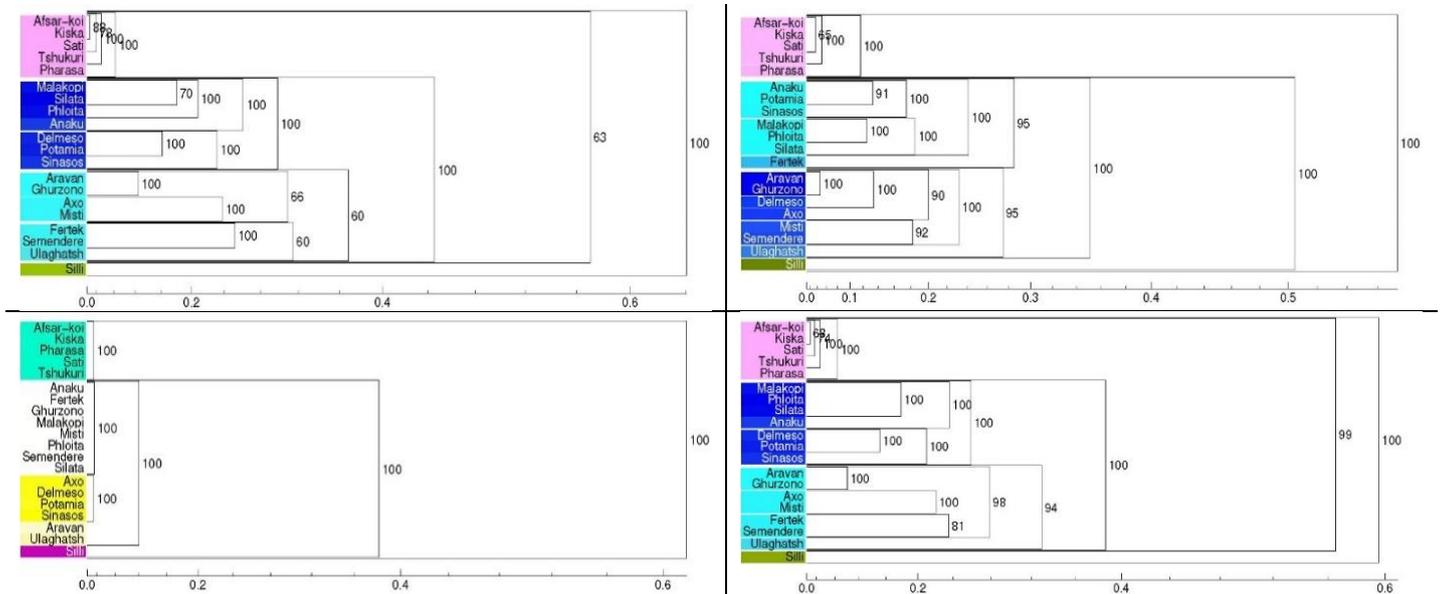
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Keywords: Asia Minor Greek, dialectometry, dialectal variation, linguistic levels

This paper reports on the first dialectometric approach to Cappadocian Greek and its relation to two other Asia Minor Greek varieties, Phrasiot and Lycaonian (Silliot). Cappadocian exhibits remarkable variation among its different communities and/or proposed dialectal zones, reflecting different degrees of shared archaisms and/or innovations, some of which –the latter– usually attributed to Turkish influence (cf. Dawkins 1916, Karatsareas 2011, Janse forthcoming).

In this line, we study the aggregate linguistic distances among twenty Greek-speaking communities (given data availability) of the Cappadocian plateau (including Phrasiot and Silliot) based on 233 categorical variants (5,402 variables) of phonological, morphological, and syntactic

nature. Data were drawn by all available sources, primary and secondary (cf. Ralli 2015: 43-98, Melissaropoulou & Bompolas 2021) and, subsequently, were subject to statistical/dialectometric and comparative analyses both separately (per level) and cumulatively, so as hidden patterns be revealed and identified (Scherrer & Stoeckle 2016).



**Figure 1:** Fuzzy clustering (Kleiweg *et al.* 2004) with noise (=0.2) and limit (=60%). Top-left: Morphology (165 variables). Top-right: Phonology (48 variables). Bottom-left: Syntax (20 variables). Bottom-right: All levels (233 variables).

As Figure 1 reveals, although results vary depending on the linguistic level, aggregate distances based on morphology and phonology are significantly similar to each other ( $r=0.93$ ) as well as compared to the complete dataset ( $r=0.99$  and  $r=0.96$ , respectively), while syntax is the most deviant one ( $r=0.83$ ). As regards the dialectal groupings, while the general subdivision into North-South Cappadocian (Dawkins 1916: 211) is rather stable, the refined classificatory scheme proposed by Janse (2008: 191, forthcoming), subdividing the Cappadocian varieties into North/South-Western/Eastern and Central Cappadocian, holds only partially, mainly for North Cappadocian. Emphasizing syntax, syntactic variables are lesser –in terms of absolute numbering– and have a wider distribution, not exhibiting the differentiated subdivisions attested at the other linguistic levels (Glaser 2013, Lekakou 2017). Finally, our results confirm the dialectological assumptions, supporting the status of Cappadocian, Pharasiot and Silliot as separate entities, yet belonging to the same dialectal group (Dawkins 1916: 206, Bağrıaçık 2018: 4 and references therein). Interestingly, Cappadocian and Silliot share shorter cophenetic distances at the levels of phonology and syntax, indicating some degree of similarity, while Cappadocian and Pharasiot at the level of morphology as well as in the whole dataset (see also Manolessou 2019: 30).

The implementation of such a dialectometric approach is advantageous in that the dialectal classifications are not pre-structured by linguistic assumptions underlying the selection of isoglosses, but they are generated from a huge set of data in which variation of forms in a single area is seriously taken into account (Pickl & Rumpf 2012), leading to more adequate interpretations of the pathways in which language variation distributes spatially (Wieling & Nerbonne 2015: 248-250 and references therein).

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On cleft ellipsis: a syntactic and functional account of reduced c'est-clefts

Charlotte Bourgoïn, Karen Lahousse & Kristin Davidse

<not updated>

## Distinguishing lexical and grammatical adpositions

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Key words: adpositions, grammatical, lexical, aphasiology, psycholinguistics

There is a long tradition in linguistics for distinguishing between lexical (or ‘content’) and grammatical (or ‘function’) words (Lyons 1968: 273). As part of this tradition, some word classes (e.g. nouns, verbs) are classified as lexical, and others (e.g. articles, pronouns) as grammatical (e.g. Hopper and Traugott 2003: 4; Chomsky 2014: 48). Often such classifications are based on the assumption that lexical words form open classes, while grammatical words form closed ones (e.g. Martinet 1960: Section 4.19; Harley 2006: 118), but this assumption has been rejected on several occasions (e.g. by Bisang 2010: 291). Accordingly, there is growing evidence that word classes may comprise both lexical and grammatical members. This is the case not only with the class of verbs, for which the distinction between lexical full verbs and grammatical auxiliaries is well-established, but also for pronouns (Ishkhanyan & al. 2017) and particles (Sun & Boye 2019).

Likewise, it has been argued that a distinction can be made between lexical and grammatical adpositions (e.g. Bennis et al. 1983; Rauh 1993). However, the distinction has been drawn on criteria that cannot, or have not, been anchored in a general theory of the lexical-grammatical distinction. For instance, Bennis et al. (1983) base their distinction on semantic and syntactic considerations that apply only to adpositions and not to other word classes.

In this talk, we argue for a distinction between lexical and grammatical adpositions based on Boye & Harder’s (2012) usage-based theory according to which grammatical items are by convention discursively secondary (background), hence dependent on a host item, while lexical items have the potential to be discursively primary (foreground). We first argue that the focusability and addressability criteria proposed by Boye & Harder do not work for adpositions because adpositions do not form constituents in isolation from their complements. Subsequently, we show how a third criterion of modifiability (cf. Hengeveld 2017) can be derived from the theory, and used to distinguish lexical and grammatical adpositions: only the former allow modification by means of adverbs like *right* (cf. Rauh 1993).

- (1) *They went (right) off the road.*
- (2) *They live in a suburb (\*right) of Oslo.*

Based on the modifiability criterion, we then classify a number of Danish prepositions as lexical or grammatical, and we present two empirical studies the results of which support the classification. In the first study, we used a sample of agrammatic speech from a Danish brain-damaged speaker to test and eventually confirm the hypothesis that the production of prepositions classified as grammatical are more severely affected than that of lexical prepositions. In the second study, we conducted a so-called ‘letter detection’ test (e.g. Healey 1976) on 81 informants (all students) to test and eventually confirm the hypothesis based on Boye & Harder (2012) that prepositions classified as grammatical (and thus assumed to be discursively secondary) attract less attention than lexical prepositions.

The results of the second study have important implications for the idea of a lexical-grammatical continuum, which we will discuss towards the end of our talk.

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## The role of language exposure in mediated Receptive Multilingualism

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Keywords: language exposure, metalinguistic awareness, mediated receptive multilingualism, formal instructions, Estonian, Russian, Ukrainian.

Linguistic exposure creates various opportunities for language learning: language users may actively participate in cultural activities in the target language, take a language class, or simply be members of a multilingual community and still benefit from a passive exposure (Rice, Kroll 2019). Language exposure has a direct link to metalinguistic awareness that is claimed to be one of the factors that improves comprehension and language learning. The concept of incidental learning is also associated with language exposure (Malone 2018). It has been recognised as learning without intention to do so (Bruton et al. 2011). At the same time, explicit instructions are still considered as the most effective in language learning. It was proved that language exposure has also a positive effect in language learning in formal settings (Spada, Lightbown 2008). This study reports on the role of language exposure and

its potential in both incidental learning and formal instructions as one of the factors that can enhance metalinguistic awareness and by this foster language proficiency in the context of mediated receptive multilingualism. Mediated receptive multilingualism is a communicative mode in which understanding can be reached through the medium of a language that is closely related to the target language (Branets et al. 2019). In this experimental setting, it is investigated how speakers of Estonian as L1 understand L3 Ukrainian via their proficiency in L2 Russian (B1 and B2 proficiency levels).

The experiment involved 30 Estonian participants and the following test materials: a questionnaire, C-test in Russian, word recognition and text comprehension tasks in Ukrainian. The questionnaire included questions about participants' level of exposure to Russian and the domains. Participants were divided into two groups: 10 participants received explicit instructions prior to the experiment and 20 participants did not receive any instructions. The instructions included a presentation about similarities and differences between Ukrainian and Russian and audio recordings of the Ukrainian texts.

The findings demonstrate that in the context of mediated receptive multilingualism, L2 exposure boosts both L2 and L3 comprehension of a particular type: exposure to Russian correlated with C-test performance in Russian and recognition of words in Ukrainian. However, there was no connection between exposure to Russian and performance on tests measuring overall text understanding in Ukrainian. This suggests that understanding of Ukrainian texts requires more than grammatical and lexical proficiency which can be partially achieved through language exposure. On the other hand, the boosting effect was found on the word-level comprehension, which suggests that even limited exposure may increase metalinguistic awareness. The experiment included two additional test conditions based on a hypothesis that formal instructions present another potential source of learning that is more explicit: some participants were tested with and others without prior formal instructions about Ukrainian. These explicit instructions lead to improved L3 performance and in their absence, the role of exposure was even more pronounced. It is concluded that both explicit and implicit factors interact and become more or less salient depending on particular configurations of available resources.

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## **A distinct marker of completion and inadvertence within the tense-aspect-evidentiality-system of Khalkha Mongolian**

## Benjamin Brosig

In Khalkha Mongolian, the so-called “Completive” or “Intensive” marker *-čix-* is found in 12% of finite predicates (in a 6-hour corpus of free conversation). Its meaning is usually described as stressing the completion of an action (e.g. ÖMYSMSDSMKBSG 1964: 490). In the aspecto-temporal domain, *-čix-* denotes the attainment of actional boundaries and may disambiguate predicates in which such attainment is optional. For instance, it is incompatible with progressive marking and forces past-referring interpretations of perfective markers (1), resultative interpretations of resultative-continuative markers, and future-referring interpretations for the non-past forms of inceptive-stative verbs (2).

- |        |                              |    |   |
|--------|------------------------------|----|---|
| (1) a. | <i>av-čix-laa.</i>           | b. | <i>av-laa.</i>                                    |
|        | take-COMPL-IM.DIR.PST        |    | take-IM.DIR.PST                                   |
|        | ‘[SUBJ] took it              |    | ‘[SUBJ] is about to take it.’ / ‘[SUBJ] took it.’ |
| (2) a. | <i>med-čix-ne.</i>           | b. | <i>med-ne.</i>                                    |
|        | come.to.know+know-COMPL-NPST |    | come.to.know+know-NPST                            |
|        | ‘[SUBJ] will come to know.’  |    | ‘[SUBJ] knows.’                                   |

However, actional meanings don’t exhaust the semantic range of *-čix-*. Meanings such as unexpectedness, suddenness, forcefulness (Svantesson 2003: 168), inadvertent or dissatisfactory execution (Brosig 2014: 46-51 on closely related Khorchin Mongolian) or carelessness (informants) have been suggested, but not demonstrated. Similar notions have been reported for the Turkic auxiliary verbs *tašla-/kamiš-* ‘throw away’ and *ï:δ-* ‘send away, release’ (Johanson & Csató 2018: 154). which are comparable since *-čix-* is connected with *-ž orxi-* [-CVB + ‘abandon’] (Luvsanvandan 1968: 143) by a cross-linguistically attested grammaticalization path for completive aspect (Kuteva et al. 2019: 252-253).

Judging from Khalkha corpus data, it appears evident that marking the attainment of actional boundaries cannot account for the wide distribution of *-čix-*. With the Perfect Participle in *-sAn*, the Completive mostly shows up in contexts in which the speaker lacks full control, either with inherently uncontrollable actions (3) or with events that the speaker can partially influence (4). This usage is also frequent with other markers such as habituais (5).

- |     |   |                |               |                 |                                 |                    |                        |
|-----|---|----------------|---------------|-----------------|---------------------------------|--------------------|------------------------|
| (3) | <i>šönö-d=öö</i>  | <i>bür</i>     | <i>arv-an</i> | <i>xed</i>      | <i>bol-čix-son</i>              | <i>bai-san.</i>    |                        |
|     | night-DAT=RPOSS   | complete       | ten-ATTR      | how.many        | become-COMPL-PRF.PTCPAUX-IM.PRS |                    |                        |
|     | ‘At night, it had even turned ten something [minus degrees].’   |                |               |                 |                                 |                    |                        |
| (4) | <i>aaan.</i>  | <i>+ ooon.</i> | <i>aan,</i>   | <i>odoo</i>     | <i>oilgo-čix-son.</i>           |                    |                        |
|     | INTERJ  | INTERJ         | INTERJ        | now             | understand-COMPL.PRF.PTCP       |                    |                        |
|     | ‘Ahhh. Ohhh. Well, now I understood.’   |                |               |                 |                                 |                    |                        |
| (5) | <i>yaay,</i>  | <i>bi</i>      | <i>barag</i>  | <i>borc-iig</i> | <i>tüüxii-geer=n’</i>           | <i>id-čix-deg</i>  | <i>bai-san=yum=šd.</i> |
|     | INTERJ  | 1SG            | almost        | dried.beef-ACC  | raw-INS=3POSS                   | eat-COMPL-HAB.PTCP | AUX-PRF.PTCP=ASS=DP    |
|     | ‘Ick, I used to eat the dried beef stripes almost raw [since I so much liked soup with beef stripes, I didn’t care to wait for them to soften up back then].’ |                |               |                 |                                 |                    |                        |

In this presentation, then, using corpus data confirmed by multiple informants, we will explore

1. the extent to which *-čix-* is required to facilitate an aspectual interpretation or rather helps to express notions related to reduced agency such as lack of anticipation, control, volitionality or care
2. whether the form always takes the perspective of the speaker or might also relate to the control etc. of the subject or another participant
3. how *-čix-* correlates with aspectual and evidential suffixes which reflect the speaker's perspective, and to what extent it fulfills a role that in several Southern Mongolic languages (e.g. Fried 2018) is fulfilled by evidential markers.

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## **The influence of formality on the expression of contrast in French: A corpus analysis of contrastive adverbs and emphatic pronouns**

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Keywords: contrast, formality, French, corpus analysis, syntactic position

**GOAL AND BACKGROUND.** The **goal** of this talk is to analyze the influence of formality on the syntactic placement patterns of two competing constructions which explicitly signal contrastivity in French: contrastive adverbs (CADVs) and emphatic pronouns (EPROs). CADVs can show up before the subject (S), between S and the verb (V), or after V. EPROs can occur in the same positions, except for before S:

(1) *Eva regarde la télé. [BEFORES **Par contre/\*Lui**] Jean [BETWEENS&V **par contre/lui**] dort [AFTERV **par contre/lui**].*

‘Eva is watching television. [BEFORES **On the other hand/\*He**] Jean [BETWEENS&V **on the other hand/he**] is sleeping [AFTERV **on the other hand/he**].’

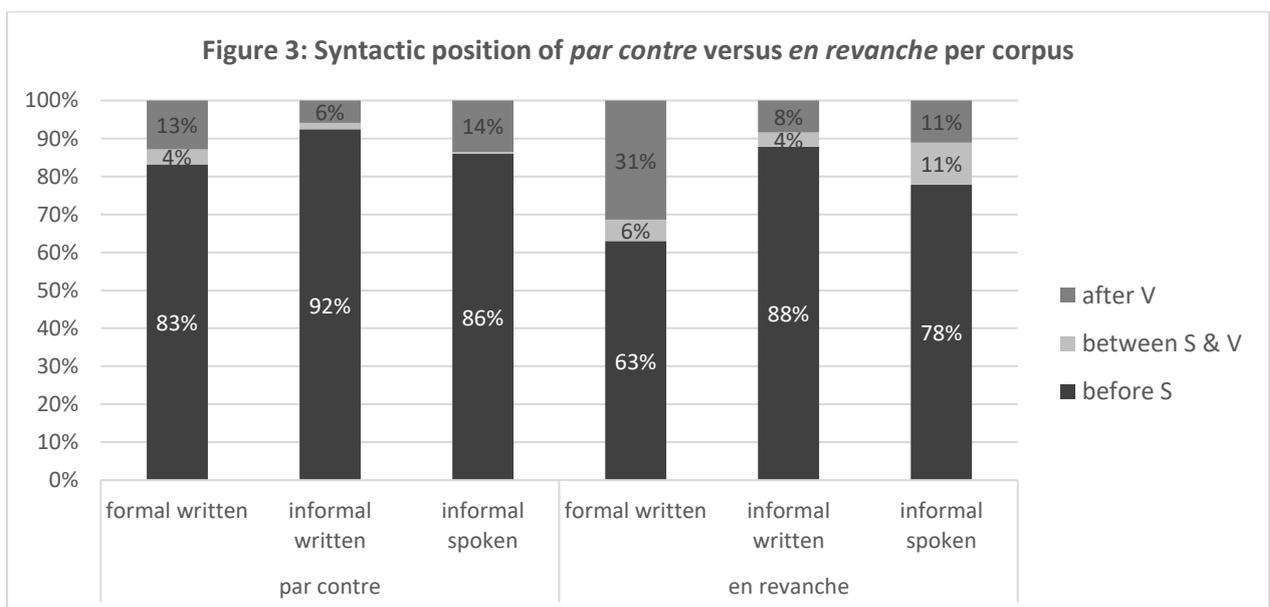
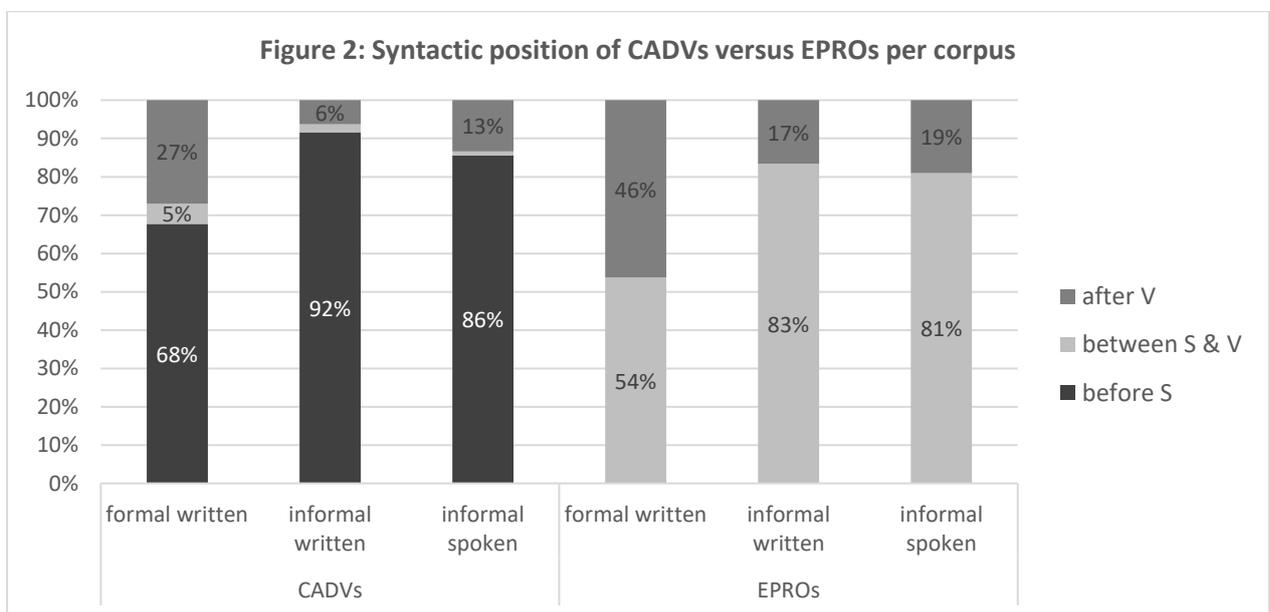
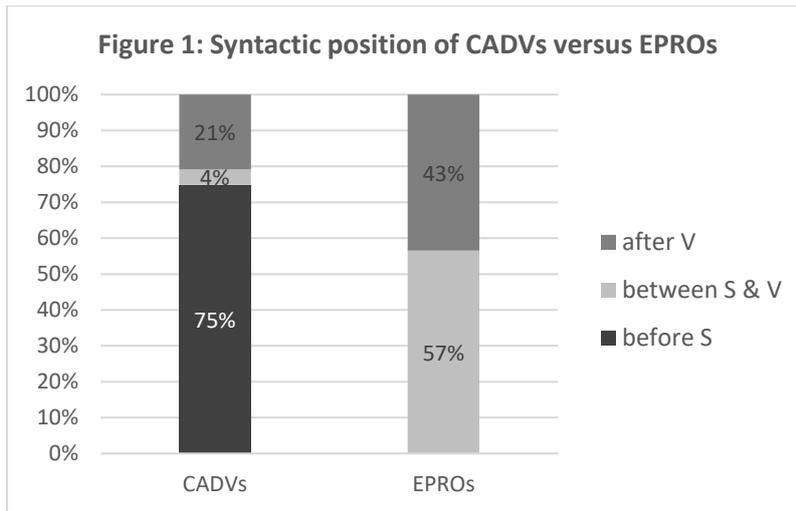
**Previous research** on CADVs and EPROs (i) mainly deals with the BEFORE S and AFTER V positions and does not consider the BETWEEN S AND V position (Csúry 2001, Hamma & Haillet 2002, Detges 2018, and Detges & Waltereit 2014), although it has been noticed that CADVs and EPROs do occur here (Dupont 2015, 2019, and Rocquet 2014). Moreover, (ii) nothing is known about the influence of formality on the placement patterns of CADVs and EPROs and (iii) these constructions have never been compared.

**METHODS.** We present the results of a quantitative **corpus analysis** of the placement patterns of CADVs (5706 tokens in total) and EPROs (3115 tokens in total) in formal written ([https://www.ortolang.fr/market/corpora/est\\_republicain](https://www.ortolang.fr/market/corpora/est_republicain)), informal written (<https://fr.answers.yahoo.com/>) and informal spoken French (<http://cfpp2000.univ-paris3.fr/>). We control for the influence of medium by integrating both written and spoken corpora.

**RESULTS.** Our data show that:

1. CADVs and EPROs have a **different preferred position**: CADVs occur most frequently BEFORE S, whereas EPROs occur most often BETWEEN S AND V (Figure 1). This is in line with their function, since CADVs are primarily linking devices, whereas EPROs anaphorically refer to the S and unambiguously mark its contrastive nature.
2. The syntactic position of both CADVs and EPROs is **influenced by the level of formality**: AFTER V is significantly more frequent in formal than in informal French (Figure 2). This supports the hypothesis that formal French is more planned.
3. The syntactic position of CADVs is **influenced by lexis**: irrespective of the level of formality, *par contre* ‘on the other hand’ displays a strong preference for BEFORE S, whereas *en revanche* ‘on the other hand’ occurs significantly less often BEFORE S in formal than in informal French (Figure 3). This is linked to the fact that *par contre* is characteristic of informal French (Brysbart & Lahousse 2020) and always prefers the CADV position typical of informal French (i.e. BEFORE S), even in formal French.

**CONCLUSIONS.** CADVs and EPROs differ with respect to their preferred syntactic position, which is in line with their function, but they are similar in that they both occur more often AFTER V in formal than in informal French. The influence of their function on their syntactic position is thus more “neutralized” in formal French, which can be linked to the fact that formal French is more planned. Our study also shows that there is a combined effect of several factors – formality and lexis – on syntactic placement patterns.



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## 'kume a se 'ʃfama ʃy tø mu 'dʒe? A case of pragmaticalization in Liguria, Italy

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Keywords: pragmaticalization, Romance, Ligurian, EFP, contact-induced change

In Ligurian and Ligurian Regional Italian (LRI), the adverbs *ʃy* and *più* (usually meaning 'already' and 'more'), both from Lat. *plus*, are used as discourse markers in direct and indirect interrogative sentences. In these instances, they indicate relative confidence in or previous knowledge of the answer.

- (1a) Ligurian  

'kume	a	se	'ʃfame	ʃy	tø	mu 'dʒe?
how	she	REFL.INTR	name.PRS.3SG	already.DM	your.2SG.POSS	wife?

 What's your wife's name, again?
- (1b) LRI  

Come	si	chiama	più	tua	moglie?
How	REFL.INTR	name.PRS.3SG	already.DM	your.2SG.POSS	wife

 What's your wife's name, again?
- (2a) Ligurian

<i>me</i>	<i>dumandu</i>	<i>dunde</i>	<i>i</i>	<i>sun</i>
REFL	ask.PRS.1SG	WHERE	they.3PL	are. PRS.3PL
<i>fy</i>	<i>i</i>	<i>fa 'zæ</i>		
already.DM	the	beans		

I wonder where the beans are (again).

(2b) LRI

<i>Mi</i>	<i>domando</i>	<i>dove</i>	<i>sono</i>	<i>più</i>	<i>i fagioli</i>
REFL	ask.PRS.1SG	WHERE	are. PRS.3PL	already.DM	the beans

I wonder where the beans are (again).

*fy* and *più* belong to the so-called ‘*Erinnerungsfragepartikeln*’ (EFP), interrogative particles of remembering (Franck 1980), which are attested in many linguistic varieties in north-western Italy, France, and Germany.

Over the past 15 years, there have been significant contribution to the theoretical discussion of pragmaticalization of discourse markers, as in Waltereit (2006) and Degand & Evers-Vermuel (2015). Studies on EFP, show that the interrogative particles of remembering typologically undergo a process of pragmaticalization, as we can see in Piedmontese *già* (‘yet’/ ‘already’), and French *déjà*, both coming from Lat. *(de)iam* (Squartini 2013 and 2014). The pragmaticalization of EFPs has been diachronically described by Fedriani & Miola 2013 as a contact-induced phenomenon within the SAE linguistic area.

I argue that the EFP *fy* and *più* have to be considered as an analogous case of SAE contact-induced pragmaticalization, which spread in Ligurian dialect and then, as a consequence, it is attested also in LRI. Rather than identifying *fy* as a ‘cumulative adverb’ (Fedriani & Miola 2014), I suggest that the original functioned of the adverb was temporal, as we can see in phrases such as Lig. *nu so fy* (‘I don’t know [lit.] anymore [Lig. *fy*]’) and *nu me ri 'kordu fy* ‘I no longer [Lig. *fy*] remember’).

In this paper, I investigate the process of pragmaticalization of Lig. *fy* and LRI *più* in a diachronic perspective, aiming to describe the development of the pragmatic functions of the adverbs and their re-functionalization into discourse markers (DMs).

First, I will analyze a corpus of literary and documentary texts in Ligurian dialect, dating from the 18<sup>th</sup> to the 21<sup>st</sup> century. Then I will compare the results obtained with the answers to a linguistic questionnaire which I have administrated to Ligurian and LRI speakers about the current usage of the DMs *fy* and *più*.

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The lexical and typological trajectory of Indo-European gender evolution

Gerd Carling, Marc Tang, Silvia Luraghi, Sunny Pydugadu, Olof Lundgren & Filip Larsson  
<not updated>

## **Pathways from adverbial subordination to complementation: The case of English *till* and *until***

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Keywords: complementation, *for...to*-infinitive, minor complementizer, syntactic change

Previous research has shown that certain originally adverbial subordinators, such as *as if* in (1), may acquire a complementizer function over time, thereby coming to serve as (near-)equivalents of the declarative complementizer *that*.

- (1) It seemed **as if** / **that** he was trying to hide his true identity (Huddleston and Pullum 2002: 962)

López-Couso and Méndez-Naya (2012, 2015) have extensively discussed the complementizer use of a number of adverbial links which have followed this course of development, for instance *as if*, *as though*, and *lest*. They show that these so-called ‘minor’ complementizers typically originate in subordinating links introducing clauses of Comparison (*as if*, *as though*) and Negative Purpose (*lest*), among others.

This presentation addresses the same phenomenon in an adverbial domain not explored to date, namely, the domain of Time (Kortmann 1997: 84–85). More specifically, I will consider the history and use of two temporal subordinators, *till* and *until*, which are attested in complementizer function with the verb of Desire *long*, as exemplified in (2) and (3), respectively.

- (2) most marry'd women long **till it be night**, but, for my part, i hate the thoughts of it (1681, EEBO BYU)
- (3) let us long **untill we come to the fingering and possession of it**: even as the heire longeth for his inheritance (1632, EEBO BYU)

The study draws on data from a number of sources, including *Early English Books Online* (1470s–1690s, EEBO BYU, Davies 2017) and the *Corpus of Late Modern English Texts* (1710–1920, CLMET3.0, De Smet et al. 2013). Results show, inter alia, that the possibility for the verb *long* to be

used as a one-place predicate (OED s.v. *long* v.6b), as in (4), sometimes led to ambiguous contexts in which a double interpretation of *till/until*-clauses was possible, as adverbial or as complement clauses, as happens in (5). Such ambiguous uses served as bridging contexts (Heine 2002) allowing an originally temporal proposition to be interpreted as the event that is desired by a Desirer.

- (4) I knew a pore woma~ with childe which **longed** and beinge overcome~ of her passio~ eate flesh on a fredaye [...]  
 ‘I knew a poor woman with child who felt longing and being overcome by her passion at eat flesh on a Friday’ (1528, EEBO BYU)
- (5) how doeth he long **till his heart bee againe enlarged**, that hee may run the race of gods Commandements? life it selfe is vnpleasant till this liberty be obtained againe (1628, EEBO BYU)

In their new use as complementizers, illustrated in (2)–(3) above, *till* and *until* occur relatively frequently in Early Modern English (76 tokens in my data). However, during Late Modern English, they enter into competition with the *for...to*-infinitive pattern, illustrated in (6), which at the time was beginning to emerge in object position, as documented by De Smet (2013: 90), and are eventually ousted by it. The presentation traces in detail the stages in this process of replacement.

- (6) She longed **for the old dark door to close upon her** (1844, CLMET3.0)

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## Lexico-aspectual constraints on split intransitivity and auxiliary selection in Italo-Romance: variation and change in synchrony and diachrony

Michela Cennamo

In this talk I shall discuss the system of auxiliary selection and split intransitivity in some (northern and southern) Italian varieties, and I shall compare the patterns of invariance and variation emerging from the synchronic analysis of the distribution of HAVE and BE with intransitive verbs in the perfect and the pluperfect in today's dialects, with the (ir)regularities appearing from the investigation of analogous data from 14th and 15th century texts.

The contemporary varieties examined show considerable fluctuation in auxiliary selection, with HAVE being the main auxiliary, and BE having a restricted range of occurrences, confined to some verb classes and some grammatical persons (Ledgeway 2000, 2019; Manzini & Savoia 2005; Bentley 2006; Cennamo 2008, 2010; Miola 2017). Variable auxiliary selection characterizes also some early vernaculars, clearly revealing a change in progress in Old Neapolitan, leading to the gradual spread of HAVE as a perfective auxiliary, to the detriment of BE, and the ensuing elimination of the original distinction between two subclasses of intransitives marked through auxiliary selection (respectively BE with unaccusatives and HAVE with unergatives) (Cennamo 2008, 2010).

I will show that, although auxiliary distribution does not clearly identify two subclasses of intransitives in the varieties investigated, corresponding to the well-known distinction of unergatives-class S<sub>A</sub> verbs/unaccusatives-class S<sub>O</sub> verbs, either synchronically or diachronically, the variation is nevertheless structured, neatly accountable within the gradient model of split intransitivity put forward by Sorace (2000, 2004, 2011, 2015), and sensitive to the interplay of a number of aspectual and thematic parameters, instantiated by Sorace's Auxiliary Selection Hierarchy (ASH).

More specifically, I will argue that a gradient approach to split intransitivity not only accounts in a principled manner for the synchronic and diachronic alternations in auxiliary selection observable in the varieties investigated, but also offers an explanation for the striking convergence between their synchronic distribution and diachronic path of development.

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Unusual agreement targets and controller choice: the case of Khwarshi

Marina Chumakina & Ekaterina Lyutikova  
<not updated>

## **Diachronic pathways to constructional harmonies and what they mean for typological universals**

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Keywords: typology, diachrony, word order harmonies, alignment, overt marking

Typological universals often involve constructional harmonies whereby some construction A usually occurs when some construction B also occurs, but not vice versa. These harmonies are generally explained in terms of principles that operate independently for A and B and lead to the co-occurrence pattern, e.g. principles involving the respective processing ease of A and B, as proposed for word order harmonies (Hawkins 1994, 2004), or the relative need to disambiguate different meanings respectively encoded by A and B, as proposed for harmonies involving typological markedness (Comrie 1989, Croft 2003, Haspelmath 2008). This idea has been influential in several disciplines, for example, prompting research on the possible effects of this type of principles in language acquisition (Culbertson and Newport 2017) and the evolution of constructional harmonies within genetic phyla (Dunn et al. 2011).

The paper argues that, while this view is based on the synchronic properties of constructional harmonies, positing this type of principles is unwarranted in light of several diachronic processes that shape these harmonies cross-linguistically. This is illustrated through several pieces of cross-linguistic diachronic evidence about the origins of harmonies involving relative clause order and possessor order, ergative and accusative marking for nouns and pronouns, and overt singular and plural marking. Often, the co-occurrence of two harmonic constructions cannot be related to principles operating independently for each construction, because these constructions do not originate independently. Sometimes, for example, harmonic relative clause orders and possessor orders are not actually distinct orders: the relative clause construction and the possessive construction continue the word order of one and the same source construction, or the relative clause construction is derived from and inherits the order of the possessive construction. Harmonic uses of ergative or accusative marking for both nouns and pronouns or overt marking for both singular and plural are often a result of the overall distribution of a single source construction, which had a different function but was used in all of the relevant contexts (e.g. possessor or oblique markers used with both nouns and pronouns evolve into ergative or accusative markers, demonstratives or third person pronouns with singular and plural forms evolve into gender/number markers).

Evidence for principles operating independently for each harmonic construction can only come from cases where these constructions originate through separate processes, e.g. distinct source constructions giving rise to relative clause order and possessor order, to ergative or accusative alignment for nouns and ergative or accusative alignment for pronouns, or to overt singular marking and overt plural marking. While many such cases are attested cross-linguistically, their impact will vary from one harmonic pattern to another, so they should be disentangled in order to assess the actual evidence for the relevant principles.

In line with some previous diachronically oriented research (Bybee 1988, 2006; Aristar 1991; Blevins 2004), these facts suggest a new approach for disciplines that investigate constructional harmonies and typological universals in general, one where the focus shifts from synchronic distributional patterns to an understanding of multiple source constructions and diachronic processes that shape these patterns cross-linguistically.

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## Semantic perspectives on Baniwa classifiers

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**Keywords:** classifiers, nominal classification, semantics, grammaticalization, Arawak languages

Baniwa [bwi] is an Arawak language spoken in northwestern Amazonia, which makes ample use of its 50-or-so classifiers. These are realized as suffixes, and are used in several morphosyntactic contexts, in both inflectional and derivational functions (Aikhenvald 2007). Previous studies have primarily focused on their morphosyntactic properties (e.g. Ramirez 2001 Aikhenvald 2007), their historical origins (Aikhenvald 2019) or cultural aspects of the classification (e.g. Hill 1988, for a closely related variety), but an in-depth mapping of the semantic aspects of the system is still lacking. The current

study aims to investigate this, and to compare the semantic aspects of the system to its morphosyntactic and phonological properties in order to investigate it from a grammaticalization perspective.

The first phase of the study aims to answer the following questions: 1) Which semantic properties provide cues for classifier assignment? 2) What is the semantic core of each classifier? 3) What is the semantic range of applicability of each classifier?

The study is based on two sets of recently collected data. One set is based on a noun listing task where the stimulus consisted of a classifier in a carrier phrase (Franjeh 2018), serving to establish the classifiers' semantic cores. The other set consists of noun-classifier combinability judgments based on a 653 item noun list, serving to establish the classifiers' semantic ranges. Additionally, the nouns in the list are coded for semantic properties, in order to determine which of these provide cues for classifier assignment. Preliminary results suggest that nouns show some correspondence (to varying degrees) between their semantic properties and their classifier combinability. The classifiers are thus expected to cluster into subsets based on various parameters of their semantic behaviour.

The second phase of the study aims to answer the following question: 4) Do the classifiers' semantic properties correlate with their morphosyntactic and/or phonological properties?

The classifiers' semantic, morphosyntactic and phonological properties are—likewise—expected to show (some degree of) correspondence. There is reason to believe that the Baniwa system is undergoing grammaticalization, as instances of some morphosyntactic properties generally taken to be signs of a higher degree of grammaticalization (e.g., allomorphy, suppletion and syncretism), are concentrated in a certain part of the paradigm. The goal of this comparison is to investigate the system-internal variability in the degree of grammaticalization of Baniwa classifiers, as all three of these domains are normally involved in grammaticalization (Heine & Kuteva 2002).

In a broader perspective, the study can hopefully shed some light on an understudied system which is interesting from a typological perspective. Nominal classification systems similar to that of Baniwa can be found in many languages in western Amazonia (cf. Seifart 2005), and have been argued to pose a challenge to nominal classification typology by not being easily positionable within the traditional typological space (Grinevald & Seifart 2004). This study can hopefully contribute to the understanding of how such systems arise and what functions they have for language users, which would be of importance for nominal classification research in general.

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Bessarabian Ukrainian: A New Linguistic Area in the Making?

Andriy Danylenko  
<not updated>

## **The effect of explicit instruction on the use of discourse markers in Italian as L2**

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Keywords: Italian as L2; discourse markers; explicit instruction; implicit instruction; pragmatic competence.

This research aims to explore the effect of explicit instruction on the use of discourse markers (DMs) by international students of Italian as a second language (L2). Although discourse markers have received much attention in the last decades, few studies (e.g. Yoshimi 2001, Hernandez 2011, and Jones and Carter 2013) have addressed this issue so far. More evidence is therefore needed to support the view that instruction may contribute to the development of pragmatic functions in a second language.

30 students from various nationalities (e.g. Peruvian, Spanish, Iranian, Turkish) with A2-B1 proficiency level participated in the study: 15 students represented the experimental group and 15 students the control group. Both groups were given a written pre-test and a post-test consisting both of a story telling completion task and a dialogue completion task.

The instruction consisted of: a detailed information about the use and function of DMs, the exposure to native-models use of DMs (movies video clips, interactions from native speakers' conversations), the communicative tasks and contextualized practice (roleplays). The students of the control group were exposed to the input flood and were encouraged to notice the DMs but they were not presented with the detailed description of DMs and were not engaged in any communicative practice other than drills and cloze tests.

The Italian markers *beh* ('well'), *magari* ('maybe'), *insomma* ('in short'), *quindi* ('then', 'so') were the focus of the instruction. This selection was made due to their frequency in conversation and their special intriguing polyfunctionality such as in the case of *magari* (see Schiemann 2008). The research attempts to verify to what extent the explicit instruction facilitates the use of DMs by the students in terms of frequency and variety of pragmatic functions. Results of the study point to the differences between the two groups. The experimental group showed a greater range of pragmatic functions (interactional, metadiscursive and cognitive) associated with the DMs than the control group. In addition, the learners of the control group used DMs less frequently than the learners of the experimental group (in both post-test tasks). Further differences were noticed in relation to the type of task the learners were engaged with: in both groups, the story telling seemed to foster the use of DMs (especially DMs with metadiscursive functions such as *quindi*).

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## Token-based distributional semantics for grammatical alternation research

Stefano De Pascale & Dirk Pijpops  
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Keywords: grammatical alternation, distributional semantics, token-based vector space models, Dutch, transitive-prepositional alternation

Syntactic research has been increasingly interested in the **study of alternating constructions**, i.e. forms that are largely considered to be mutually interchangeable (e.g.: the dative alternation (Szmrecsanyi et al. 2016)). Corpus-based analyses of such grammatical alternations typically involve meticulous annotation of high-order properties of the context in which the grammatical form appears (e.g.: animacy of the theme etc.). Yet, taking stock of grammatical alternation research Gries (2019: 78) cannot help but notice that “one aspect of the context seems to be crucially underutilized when it comes to modeling speakers' choices: the **lexical context**.”

The integration of lexical context in alternation research can be operationalized in various ways. In this paper we explore the use of **token-based distributional-semantic modelling** (Schütze 1998; Hilpert and Saavedra 2020). This type of analysis constitutes a corpus-driven method for modelling the meaning of individual corpus occurrences of a certain variant (e.g.: the prepositional variant in the dative alternation). The so-called semantic vector of such a corpus token is derived indirectly by modelling precisely the meaning of the lexical context surrounding that grammatical token. The modelled tokens can then be represented as token clouds in a multidimensional vector space, with clusters of tokens revealing the **polysemy of the grammatical forms**. Token-based vector semantics has proven a promising method for the study of lexical-semantic phenomena (Author1, 2019; Heylen et al., 2015). The novelty of our contribution is the extrapolation of this technique from the purely lexical domain to that of morphosyntax.

Concretely, we choose as case study the **transitive-prepositional alternation in Dutch**, exemplified by a construction such as *naar een boek zoeken* vs. *een boek zoeken* ‘to search (for) a book’. This alternation was investigated in depth in Author2 (2019). The large manually annotated dataset underlying his study comprises 117697 tokens of different verbs and prepositions participating in this alternation and offers an important point of comparison to evaluate our token-based distributional semantic take on the issue.

With this case study, we will illustrate the several **benefits** that follow from our approach. First, in contrast to the traditional top-down identification of high-order predictors, a token-based distributional analysis can now be used to identify those features in a bottom-up way. Second, by

superimposing the token clouds of each of the grammatical variants, one can distinguish regions of contextual overlap (i.e. where the variants are interchangeable) from token regions in which the forms cannot alternate. The semi-automatic identification of overlapping token clouds contributes to scaling up grammatical alternation research, by providing methods for dealing with corpora whose size exceeds manual analysis. Third, as the window span of the lexical context is a tunable parameter in our token-based models we can compare the local lexical context, only encompassing the relevant syntactic slots of the variants, to that of the broader lexical context, which might include other, topically related lexical items. As the focus of most grammatical alternation research goes to the former type of context words, it has to be verified what other semantic information such broader bag-of-words context can contribute.

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Associated motion in Western Sicilian: a preliminary account

Noemi De Pasquale & Antoine Guillaume  
<not updated>

## **Does *he dived* take longer than *he dove*? An experimental inquiry into iconic patterns in verb morphology**

Isabeau De Smet & Laura Rosseel  
(KU Leuven and FWO Flanders; & Vrije Universiteit Brussel)

Keywords: strong and weak verb morphology, iconicity, experimental linguistics, Dutch, sound symbolism

In the Germanic languages, two types of inflection exist. Verbs can either take the strong inflection to form the preterite and past participle (using ablaut, e.g. *write-wrote-written*) or the weak inflection (using a dental suffix, e.g. *stay-stayed-stayed*). However, there are also verbs that can take both the strong and the weak inflection (e.g. *dive-dived* or *dive-dove*). In a diachronic corpus study, De Smet & Van de Velde (2020) show that in Dutch this variation can be exapted to express aspect in an iconic manner. Their results indicate that the longer weak preterites (e.g. *schulde* ‘hid’) are used more often

in durative contexts, while the shorter strong variants (e.g. *school* ‘hid’) are used more often in punctual contexts. For the past participles, this image is reversed: the longer strong variants (e.g. *gescholen* ‘hidden’) are used more often in durative contexts, while the shorter weak variants (e.g. *geschuild* ‘hidden’) are used more often in punctual contexts.

In this paper, we seek experimental validation for these results. Participants ( $N=664$ ) were presented with a forced choice task where they had to choose between weak or strong preterites and past participles of nonce verbs in sentences suggesting either a durative or a punctual context. We worked with three different between-subject conditions, namely preterite singular, preterite plural and past participle. Each survey consisted of 20 target items and 10 filler items. The target items were 20 nonce verbs of the five most productive ablaut subclasses in Dutch (cf. Knooihuizen & Strik 2014). Every verb only appeared once in each survey to prevent priming effects. Half of the target items were presented in a punctual context (which was suggested through the use of adverbials), the other half in a durative context. Hence aspect was manipulated within subject.

Results were analysed using a generalized linear mixed effects model with random effects for subject and item and random slopes for aspect by subject and by item. Though no overall effect of aspect on verb inflection was found, results indicate an iconic trend for verbs of one specific ablaut subclass that supports the corpus results from De Smet & Van de Velde (2020). Because this ablaut class shows the most variation in real language use (of the five subclasses selected for the experiment), it could be that language users need to be familiar with a certain amount of variation for a specific class in order to become routinized in exapting the variation to express aspect. Furthermore, the durative-punctual distinction was also found to be portrayed in yet another iconic manner: verb forms with vowels that are sound symbolically associated with long slow movements were used more often in durative contexts, while verb forms with vowels that are associated with quick, short movements were used more often in punctual contexts.

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## Root and word-based diminutives in European Portuguese

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Recently, evaluative morphology has garnered considerable interest in linguistics circles (Körtvélyessy, 2014). While there has been substantial research on Portuguese evaluatives (cf. Villalva, 2009; Villalva & Gonçalves, 2016), experimental data is sparse. The distribution of evaluative and z-evaluative suffixes depends on the length and thematic class of the base word, as well as familiarity. Therefore, the present study aims: (i) to experimentally evaluate the role of thematic class, based on a lexical decision task (LDT), and (ii) to bridge the gap by contributing experimental data.

Two lists of 24 diminutive words based on the same group of 3-syllable plural feminine simplex words (including *-a* (*bolachas* ‘biscuits’), *-e* (*alfaces* ‘lettuce’),  $\emptyset$  (*cicatrizes* ‘scars’) and athematic stems (*viagens* ‘travels’)), were tested. The first list contained noun roots modified by *-inhas* (*bolachinhas*, *alfacinhas*, *cicatrizinhas*, *viageminhas*) while the second list contained fully inflected nouns modified by *-zinhas* (*bolachazinhas*, *alfacezinhas*, *cicatrizezinhas*, *viagenzinhas*). Word

frequency was controlled using CRPC. A filler set was created by adding the Portuguese evaluative suffixes to 3-syllable Finnish words, to avoid facilitating the participants in making the lexical decision.

An internet based LDT programmed using PsyToolkit (Stoet, 2010, 2017) was used to present a total of 54 words, randomly, with an inter-stimulus interval of 500ms with a fixation point. The stimulus remained on the screen for 10,000ms. A short training set was included to familiarize the participants. All participants received a link to the experiment that could only be accessed on a computer with a keyboard. The task was completed in under ten minutes on average. All the informants were young adults, native speakers of European Portuguese.

The theoretical assumption is that these two competing evaluative modification processes, are used by speakers in different contexts related to word size (longer words are suffixed by z-evaluative suffixes and shorter ones by evaluative suffixes), and frequency (more frequent ones are suffixed by evaluatives and less frequent ones by z-evaluatives). These two factors have been nullified, since all the stimuli have the same size and are all frequent words. Therefore, variation of the thematic class is the only condition under analysis here.

The results presented in the following graph combine two kinds of information. The colored lines show the number of yes and no responses to the two diminutive forms. The numerical values superimposed on the previous points show the MRTs, measured in milliseconds.

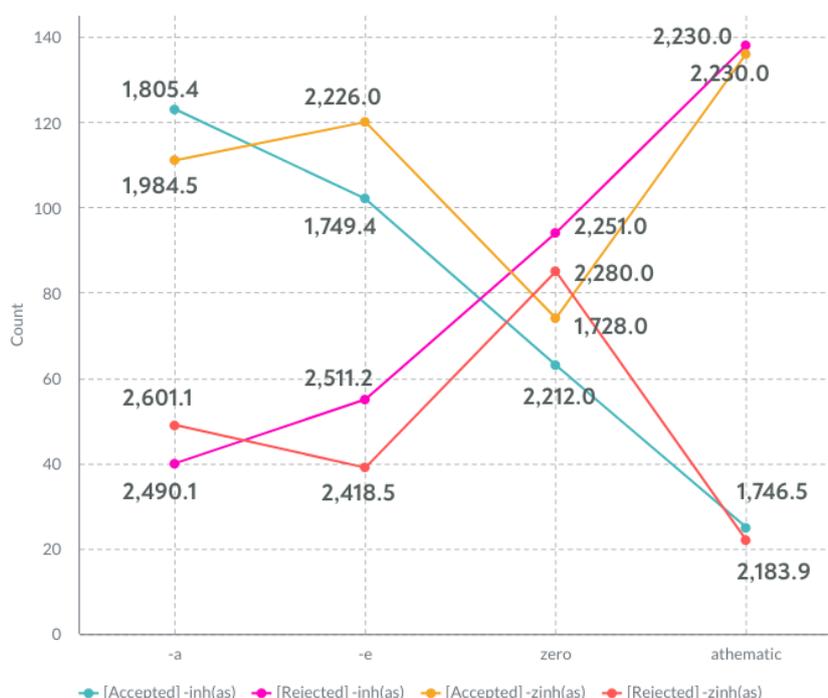


Figure 1: Acceptance and MRTs

The results reveal clear distributional trends: the acceptance of both the forms in *-a* and *-e* classes is high and they are similar to each other. In the zero-theme class, the acceptance and rejection of *-inhas* and *-zinhas* is very close; while in the athematic class, the acceptance of *-zinhas* and the rejection of *-inhas* converge, with the highest values of all.

The RTs show that the dominant acceptance of both the *-inhas* and *-zinhas* form occurs between 1728 and 1984 milliseconds; and the most substantial rejections occur between 2183 and 2601 milliseconds, indicating that the initial hypothesis is supported by the MRT data.

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The diachrony of word-like domains in Welsh

Stefan Dedio  
<not updated>

Coordinate conjunction extended projection

Anna Maria Di Sciullo  
<not updated>

The Sacral Stamp of Greek: Periphrastic Constructions in New Testament Translations of Latin, Gothic, and Old Church Slavonic

Bridget Drinka  
<not updated>

**The facilitatory role of L1 syntax in the initial acquisition of L2 syntax**

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Keywords: cross-linguistic influence, second language learning, syntax learning, semi-artificial language, rule-search

The Competition Model (MacWhinney 1992), the Full Transfer/Full Access Model (Schwartz & Sprouse 1996) and the Shared Syntax Account (Hartsuiker & Bernolet 2017) assume that first language (L1) syntax facilitates the learning of similar second language (L2) structures. Previous studies have found evidence supporting this claim (e.g. Tokowicz & MacWhinney 2005; Chang & Zheng 2015). This study seeks to contribute to the literature by exploring whether when two constructions are available to convey the same meaning in the L2, one similar to an L1 structure and the other unique to the L2, the rule underlying first one is learnt with greater ease than the rule underlying the second.

Our hypothesis claimed that the similar rule would be learnt more easily than the unique one due to positive transfer from the L1. To test this hypothesis, 44 L1 speakers of Spanish with no previous knowledge of Galician learnt a semi-artificial language with a Spanish-Galician cognate vocabulary and Galician-based syntax. Participants learnt two types of subject subordinate clauses (in brackets below). One of these constructions also exists in Spanish (1a), but the other does not (1b). The rule underlying the similar construction stated that when a subordinate clause is introduced by the complementizer “que” (*that*), the verb has to be in the present subjunctive (SUBJ). The rule underlying the unique construction said that when the complementizer does not introduce the subordinate clause, the verb has to be in the infinitive (INF). Ungrammatical sentences were derived from grammatical ones by changing the [ $\pm$ Tense] feature of the subordinate verb (1a’, b’).

- (1) a. É importante [**que** Francisco **lea** o libro]  
 it.is important that Francisco read.SUBJ the book  
 a’. \*É importante [**que** Francisco **ler** o libro]  
 it.is important that Francisco read.INF the book  
 “It is important that Francisco reads the book.”
- b. É importante [Francisco **ler** o libro]  
 it.is important Francisco read.INF the book  
 b’. \*É importante [Francisco **lea** o libro]  
 it.is important Francisco read.SUBJ the book  
 “It is important that Francisco reads the book.”

Participants were first exposed to the language while performing a rule-search task. Then, learning of the similar and unique rules was tested in a grammaticality judgement task (GJT) with feedback. Finally, a verbal report assessed awareness of the rules. Learning was measured by accuracy and d’ scores on the GJT. D’ is a measure of sensitivity unaffected by response bias. Participants were significantly more accurate when classifying sentences complying with or violating the similar rule (1a + 1a’) than when classifying sentences complying with or violating the unique rule (1b + 1b’),  $p < .001$ . Sensitivity to violations of the similar construction was also greater than to violations of the unique construction ( $p < .01$ ). Rule knowledge was conscious for 68% of participants.

In conclusion, learning was greater for the rule that was similar in the L1 and the L2 than for the rule that was unique to the L2. This result goes in line with previous studies supporting the facilitatory role of L1 syntax in L2 syntax learning.

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Synchrony and diachrony in Ket incorporation

Riku Erkkilä & Jaakko Helke

<not updated>

## Typology meets data-mining: the German gender system

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Keywords: assignment rules, data mining, gender, German, morphosyntax, typology

In recent years linguistic typology has increasingly profited from computational methods; the hope is to discover patterns in large data sets more quickly and more accurately than would be possible for a human researcher. This is commonly known as ‘data mining’. A linguistic system which could benefit from such an approach is German gender.

The German gender system is a gem among the assignment systems found in the world, for the complexity of its interacting semantic, morphological and phonological assignment principles. As fast as it offers partial results it raises new questions. This is the more remarkable since there are just three gender values: masculine, feminine, and neuter. Furthermore, the basic semantic assignment rules are relatively straightforward. Much more challenging are (i) phonological assignment (investigated by Köpcke 1982, Köpcke & Zubin 1983, among others), and (ii) the relation between gender and inflection class (see Pavlov 1995, Bittner 1999, and Kürschner & Nübling 2011). And yet, despite the progress which has been made, and the great typological interest of German gender, no attempt has been made to analyse the system as a whole.

In a system as complex as German there are at least three pitfalls:

1. cherry picking: observations of alleged regularity are sometimes based on few examples and the overall applicability of these regularities is left unexplored;
2. generalizations without a baseline: thus a prediction of a particular gender value for, say, 35% of the nouns is hardly remarkable if 35% of the nouns overall are of that gender;
3. not allowing for overlapping factors: given that phonological, morphological and semantic properties may make the same gender value more probable, making a claim for a particular generalization (e.g. phonological) requires us also to eliminate the possible effects of morphology and semantics.

To avoid these pitfalls and make progress towards a holistic analysis of the German gender system, we mine a database of more than 30,000 German nouns from WebCELEX (Baayen et al. 1995), coded for gender, frequency, phonological shape, inflection class, and derived/compounded status, which we have cleaned and to which we added semantic information (human, animal, object, abstract, mass) and frequency (based on the COW corpus, Schäfer 2015). We then built a series of analogical models using machine learning algorithms (similar to Guzmán Naranjo 2020), including different combinations of predictors (morphology, semantics, phonology, inflection class).

The overall accuracy results (Figure 1) show clearly that the system is anything but arbitrary. The combined factors reach a predictive success of over 96% (top line of Figure 1). Individual factors are also strong predictors, most notably phonological shape and inflection class. The German gender assignment system – while complex and unusual – represents a typologically well-known type: a combination of semantic and formal (morphological/phonological) assignment principles (Corbett 1991). Our conclusions relate to German gender, but we also make a larger point by showing how typologists can benefit from data mining. And we hope to reduce the ill-informed comments still made about German gender, sometimes even by linguists.

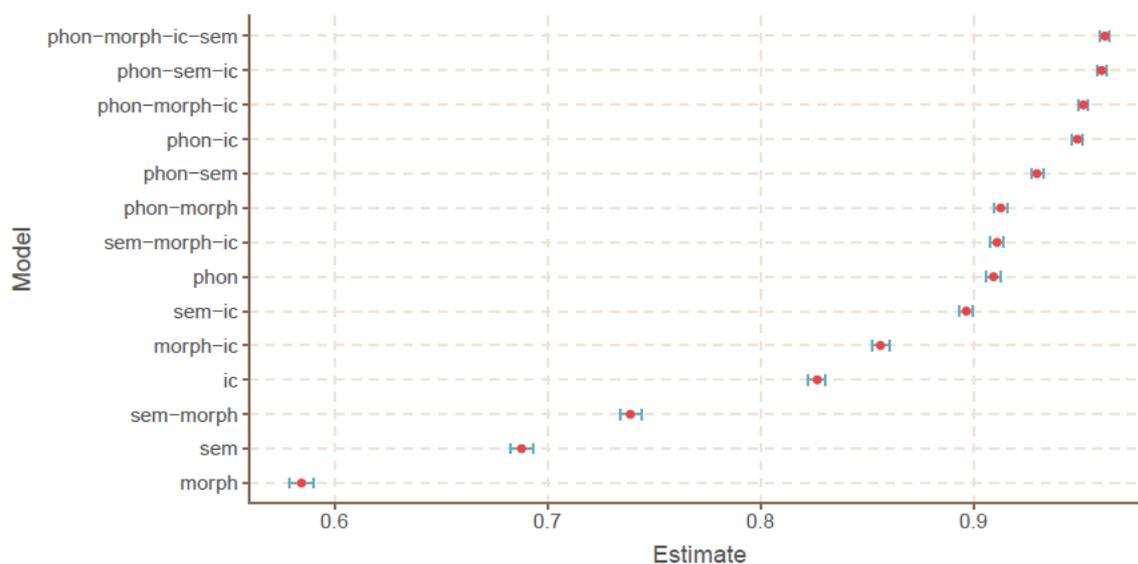


Figure 1. Accuracy and uncertainty intervals by model (ic = inflection class)

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## Languages with more speakers tend to have shorter words, more phonemes per syllable, and more words per clause

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Keywords: population size, phoneme inventory, word length, syllable complexity, isolating

Relationships between language structure and language population size remains a matter of debate. Findings, such as that population size correlates positively with phoneme inventory size (Hay & Bauer, 2007), or that population size correlates negatively with grammatical complexity (Lupyan & Dale 2010) have attracted a lot of interest.

The **objectives** of this paper are to investigate relationships between population size and the linguistic variables ‘syllable complexity’, ‘length of words’, and ‘length of clauses’. Moreover, we test whether mean syllable complexity correlates with phoneme inventory size and whether a positive correlation between phoneme inventory size and population size can be replicated for our language sample.

**Material and methods:** For testing the hypotheses, we used parallel texts of 61 languages (18 language families). The parallel texts consist of 22 simple declarative sentences encoding one proposition and using basic vocabulary. Such simple sentences are well suited for large-scale cross-linguistic comparisons because the number of possible translations can be kept to a minimum. The advantage of the matched set of sentences is, moreover, that they not only refer to the same semantic unit, but also to the same syntactic unit. This allows to calculate the number of words per clause across languages. We calculated the average syllable complexity (measured as number of phonemes), the average word length (measured as number of syllables), the average clause length (measured as number of words) in these texts. All these variables were correlated with the estimated population

sizes taken from Amano et al. (2014). Moreover, we correlated the average number of phonemes per syllable and the population sizes with the size of our 61 language's phoneme inventories found in UPSID and/or the PHOIBLE database.

**Results:** • significant negative correlation between population size and mean word length measured as number of syllables ( $r = -.25$ ,  $p < .05$ ) • significant positive correlation between population size and mean number of monosyllables ( $r = +.29$ ,  $p < .05$ ) • significant positive correlation between population size and mean number of words per clause ( $r = +.42$ ,  $p < .01$ ) • significant positive correlation between log population size and mean number of phonemes per syllable ( $r = +.34$ ,  $p < .01$ ) • significant positive correlation between log population size and phoneme inventories ( $r = +.40$ ,  $p < .01$ ) • significant positive correlation between mean number of phonemes per syllable and phoneme inventory size ( $r = +.61$ ,  $p < .01$ )

**Discussion:** The findings are discussed in light of previous research and within the framework of Systemic Typology. For instance, the positive correlation found between population size and number of words per clause dovetails nicely with Lupyan and Dale's (2010) finding that larger populations tend to have isolating morphology: A high number of words per clause indicates a low degree of synthesis and a tendency to isolating morphology. Furthermore, we propose that Zipf's law of Abbreviation explains the associations between 'population size', 'word length', 'clause length' 'syllable complexity' and 'phoneme inventory size' (Fenk-Oczlon & Pilz 2021)

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## English verb-to-noun conversion and its role in nominal compounding

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Keywords: compounding, conversion, corpus-based, deverbal, English, modifier.

The existence of formations like *flea bite*, *haircut* or *moon walk* has for some time passed unnoticed within the category of English nominal compounding. So-called *non-affixal (de)verbal compounds* (NDVCs, Lieber 2010) were initially perceived as a subclass of plain root/primary compounding resulting from the concatenation of two simple nouns, analogue to *hospital staff* or *summer dress*, but have been found out to arise from the interaction between compounding and conversion. Today, the prevailing view on the creation of NDVCs is that verb-to-noun conversion on the head applies first (1a) and compounding with another noun follows (1b):

- (1) (a)  $bite_V > bite_N$  (b)  $flea_N + bite_N > [flea\ bite]_N$

A consequence of this deverbal origin is that the left-hand member of the compound functions both as a modifier and as an argument of the action expressed by the head, be it subject (*flea bite* ‘the flea bites’), object (*haircut* ‘somebody cuts hair’) or prepositional object (*moon walk* ‘somebody walks on the moon’). Although a number of morphologists have noted features that set these formations apart from other classes of compounds (Marchand 1969, Bauer 1983, Adams 2001, Bauer & Renouf 2001, Bauer & Huddleston 2002), their description has normally treated NDVCs as an incoherent class and is in need of closer attention (Jackendoff 2010: 435-437, Lieber 2010, 2016: 42-46, Bauer et al. 2013: 466, Cetnarowska 2020).

This paper sets out to further study NDVCs through a set of attested units complemented with corpus and lexicographical information. The BNC and COCA are checked for frequencies, context details, register distribution, etc., while evidence on attestation and etymology is retrieved from the OED. This makes it possible to explore compounds in the light of a number of variables, for example their subject- vs. object- orientation, range of semantic categories or degree of productivity. This is all done with the purpose of:

- 1) Exploring the (extra)linguistic conditions which favor or hinder the creation of NDVCs,
- 2) Determining the roles played by deverbal conversion and by nominal compounding in the configuration of NDVCs, which in turn shapes the relationship between the compound constituents, and
- 3) Exploring the links between NDVCs and synthetic compounds containing an overt affix, and thus clarify possible areas of intersection or overlap.

This integrated approach is expected to shed light on the formation and behavior of English NDVCs, with special attention to the role and relevance of conversion/derivational zeroes to synchronic word-formation (Kastovsky 2005: 34-36). The study necessarily considers issues related to the competitive vs. cooperative relationship between word-formation processes, as well as the possible consequences for the paradigmatic vs. grammatical structure of noun+noun compounds.

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## **‘Celtic Englishes’ in the light of evidence from *The Electronic World Atlas of Varieties of English***

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**Keywords:** Celtic influence, Celtic Englishes, morphosyntax, varieties of English, eWAVE

This paper is based on *The Electronic World Atlas of Varieties of English* (eWAVE 3.0; see Kortmann and Lunkenheimer 2013), which provides a description of 77 vernacular varieties of English and covers 235 morphosyntactic features, compiled on the basis of descriptive materials, corpus data, and native speaker knowledge. Each feature is rated in terms of their *rate of attestation* across varieties, and experts of each variety have assessed their *pervasiveness* along a four-point scale, marking them either as ‘A’ (‘feature is pervasive or obligatory’), ‘B’ (‘feature is neither pervasive nor extremely rare’), ‘C’ (‘feature exists, but is extremely rare’), or ‘D’ (‘attested absence of feature’).

The focus of this paper is on so-called ‘Celtic Englishes’ and on what eWAVE can offer to their study. The notion of ‘Celtic Englishes’ has become an established term in linguistics largely through the series of colloquia arranged in Potsdam in the late 1990s and the early 2000s. Most of the papers read at these colloquia have subsequently been published in collections of articles under the title *The Celtic Englishes*, edited by Hildegard L.C. Tristram (see Tristram 1997, 2000, 2003, 2005). The varieties examined in these volumes comprise Irish English, Welsh English, Manx English, some dialects of Scottish English, Cornish English, and certain overseas varieties such as Newfoundland English. Common to all these varieties is the influence of one or the other Celtic language upon them at some point of their histories. In fact, a more appropriate term than ‘Celtic English’ would be

‘Celtic-influenced English’, as the amounts of Celtic influence vary greatly from one variety to another.

The aim of this paper is to demonstrate how eWAVE can be used to assess the Celticity of the supposed Celtic Englishes. Putative Celtic features have to fulfill three criteria: first, there has to be a plausible parallel in the relevant Celtic language; secondly, there has to be, or have been, contact between speakers of the variety of English and the relevant Celtic language; and thirdly, the rate of pervasiveness of the feature has to be marked as either ‘A’, ‘B’ or ‘C’.

The results show that there are only two features that satisfy all these criteria and comprise all of the mentioned varieties (except Cornish English, which is not included in eWAVE). They are labelled as ‘Wider range of uses of *be* + *V-ing* than in StE: extension to stative verbs’ (feature no 88), and ‘Absolute use of reflexives’ (no 15). Almost equally widespread are ‘Wider range of uses of *be* + *V-ing* than in StE: extension to habitual contexts’ (no 89) and ‘Inverted word order in indirect questions’ (no 227), which are found in all others except Scottish English. These two sets of features can be said to form the ‘core’ Celtic element in the Celtic-influenced varieties. These features, examples of their use, and their possible Celtic-language backgrounds are examined in greater detail in this paper.

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## Unbounded repetition, habituality and aspect

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verbal aspect, perfective/imperfective, unbounded repetition, habituality, crosslinguistic

It is often assumed that there is a special relation between habituality and the imperfective aspect (Comrie 1976 (24–25), Dahl 1985 (95–98)). Many authors treat both sentences with dedicated habitual markers which express notions like ‘usually’, and sentences with frequency adverbs expressing unbounded repetition such as ‘every morning’ as habituals (e.g. Dahl 1985: 79). In this paper I will focus on the verbal aspect of sentences with past reference in the context of unbounded repetition. Even though various authors have pointed at the occurrence of the perfective aspect in contexts of unbounded repetition (for Slavic, for example Dickey 2000, and for Romance Bertinetto and Lenci 2012), no crosslinguistic overview of the use of the perfective aspect in the context of unbounded repetition exists. This leads to the following research question:

Research question: Whether and to what extent are the factors that trigger the use of the perfective in the context of unbounded repetition identical across languages

For this research, I have examined the use of verbal aspect in the context of unbounded repetition with past reference in a well chosen set of nineteen (both related and non-related) languages:

- I. Languages where prefixation/suffixation (associated with telicity) is involved in the expression of aspect (Russian, Czech, Slovene, Bulgarian, Georgian, Ossetic).
- II. Languages with an ‘imperfective past~perfective past’ system (Spanish, Greek, Armenian, Persian)
- III. Languages with a ‘perfective~imperfective’ system (without tense) (Arabic, Tarifiyt Berber, Luwo, Tzotzil)
- IV. Non-binary aspectual systems: (i) languages with a habitual marker (Ewe, Seneca, Mohawk, Burmese), (ii) languages without habitual marker (Chinese)

Reasons to use the perfective may be to (i) focus on the micro-level of repetition, for example to avoid the idea of duration typical for the imperfective (Czech/Slovene), (ii) present all individual repeated occasions as one collective whole that is ‘over and done with’ (Armenian, Greek), (iii) focus on an individuated event with adverbs like ‘whenever’ (Arabic), (iv) emphasize the full completion of each subaction (Bulgarian, Georgian, Ossetic), (v) emphasize the past character of the repeated events (Tzotzil). However, even though these factors could be explained with reference to the specific properties of the aspectual systems of these languages (cf. Dickey (2000) for Slavic, and Janda and Fábregas (2019), for Russian and Spanish), it often turned out to be difficult to explain why languages with more or less similar aspectual systems still behave differently.

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## **What makes the clock tick? The effect of concept characteristics and sociocultural variation on lexical replacement rates**

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Keywords: lexical semantics, diachronic change, lexical replacement, Dutch, distributional semantic models

Why are different words replaced by new synonyms at different rates? Some variants replace each other rapidly (e.g. *awesome* or *lit* for COOL), while other domains display more stability (e.g. *ear*). The speed of lexical change has been shown to be influenced by *word*-related features, like frequency, word class, length or age of acquisition (Bochkarev et al. 2014; Monaghan 2014; Pagel et al. 2007; Wichmann & Holman 2013). However, these studies lack two crucial dimensions. First, they lack a sociolinguistic perspective as they do not consider variation within a language. This is problematic because language is inherently stratified and several language-external “drivers of diversity” interact with the speed of change (Nevalainen et al. 2020: 5-6). Second, a conceptual dimension is missing: to what extent do concept characteristics - and not just word characteristics - influence the rate of change?

In this project, we offer novel insight into the field of diachronic lexical change by examining the effect of *characteristics of concepts* and *socio-variational features* on the rate of lexical replacement rates throughout the lexicon. Combining insights from cognitive sociolinguistics and historical sociolinguistics, we address the importance of conceptual and lexical differences for language variation and change.

In particular, we analyze the effect of three (diachronically variable) concept characteristics that have been shown to influence *synchronic* dialectal variability (Franco et al. 2019) and inquire into their effects on *diachronic* change:

1. SALIENCE: the extent to which a concept is familiar to a language user at a given point in time
  - *Examples:* EAR (salient) vs. TELEVISION (changes in salience)
  - *Synchronic finding:* more variation for less salient concepts
  - *Diachronic hypothesis:* names for less salient concepts are expected to change more quickly than those for more salient ones
2. VAGUENESS: fuzziness at the boundaries of a concept
  - *Examples:* CUP (vague, cf. Labov 1975) vs. SPOON (not vague)
  - *synchronic finding:* more variation for vaguer concepts
  - *diachronic hypothesis:* names for vaguer concepts are expected to be replaced faster than those for less vague concepts
3. AFFECT-SENSITIVITY: the degree to which a concept is prone to negative or positive connotations at a given point in time
  - *Examples:* TO READ (neutral) vs. TO BRAG (affect-sensitive)
  - *synchronic finding:* more variation for affect-sensitive concepts
  - *diachronic hypothesis:* words used for affect-sensitive concepts are expected to change more quickly than words for neutral concepts

In addition, we investigate the effect of regional differences between the northern and southern parts of the Dutch language area, which have witnessed different political and socio-cultural developments. As a case-study, we collect a set of concepts and the variants that have been used over time from the *Woordenboek der Nederlandsche Taal* (covering the Dutch lexicon from 1500-1976). Next, we use distributional models to extract all tokens for these variants from a diachronic corpus. Using these data, we calculate how quickly the variants per concept are replaced. As a final step, we analyze the effect of the independent variables (salience, vagueness, affect and region) on the lexical replacement rates.

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## Cognitive effects of possessive classifiers: visualising complex data with dendrograms

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Keywords: Hierarchical Cluster Analysis, Dendrograms, Possessive Classifiers, Oceanic, Cognition

Do the nominal classification systems found in Oceanic languages have an impact on cognition? Many Oceanic languages have a set of possessive classifiers that are used to categorise alienable possessions according to how the possessor intends to use these possessions. Data from a suite of experiments were collected from six Oceanic languages spoken in Vanuatu and New Caledonia: Merei, Lewo, Vatlongos, North Ambrym, Nêlêmwa and Iaai. The inventory of possessive classifiers for these languages ranges from two to 24. Typically, a noun can occur with different classifiers, depending on how the possessed item is used by the possessor (Lichtenberk 1983). For example, *wi* ‘water’ in Lewo (Vanuatu) occurs with either the drinkable or the general classifier.

- |   |   |
|---|---|
| <p>1a.    <i>ma-na</i>            <i>wi</i><br/>               CL.DRINK-3SG water<br/>               ‘her (drinking) water’</p> | <p>b.      <i>sa-na</i>                    <i>wi</i><br/>               CL.GENERAL-3SG water<br/>               ‘her (washing) water’                    (fieldnotes)</p> |
|---|---|

In marked contrast, North Ambrym’s (Vanuatu) cognate for water – *we* – occurs only with the drinkable classifier (2a), not the general classifier (2b):

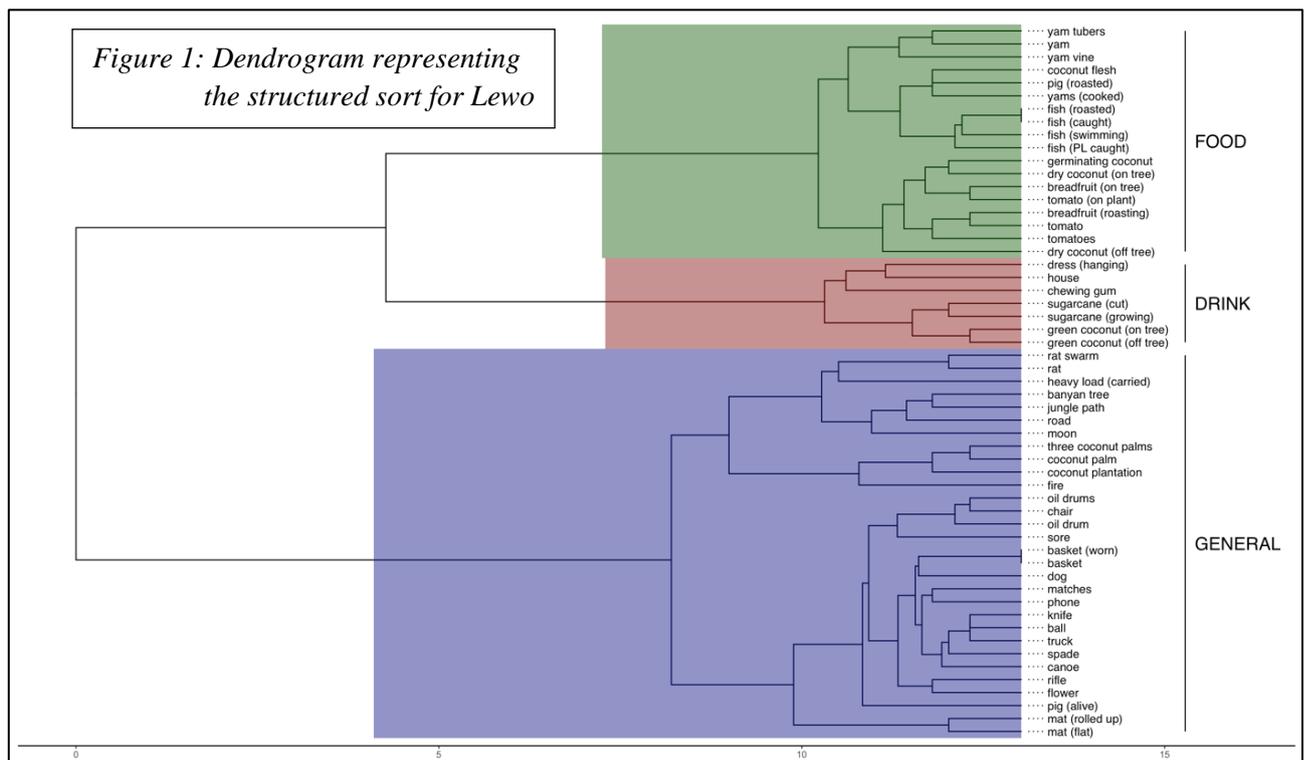
- |   |  |
|---|--|
| <p>2a.    <i>ma-n</i>                    <i>we</i><br/>               CL.DRINK-3SG water<br/>               ‘her water (for any purpose)’</p> | <p>b.      <i>*mwena-n</i>            <i>we</i><br/>               CL.GENERAL-3SG water<br/>               intended: ‘her water’                    (fieldnotes)</p> |
|---|--|

We argue that North Ambrym’s innovative system resembles a gender system: a noun occurs with a particular classifier regardless of contextual interactions. This leads to two questions (RQ1) do more gender-like fixed assignment systems (e.g. North Ambrym) effect cognition in ways which differ from

systems with a more classifier-like system (e.g. Lewo)? And (RQ2) do systems with larger classifier inventories effect cognition differently (e.g. Iaa with 24 classifiers) than systems with fewer classifiers (e.g. Merei with two classifiers)?

We discuss the results from a card sorting experiment. Participants sorted pictures of possessed entities into groups in two ways: (i) a free sort, where participants put the pictures into as many piles as they wanted according to perceived similarity; (ii) a structured sort, where participants were asked to group the images according to which classifier they could occur with. If possessive classifiers have an impact on cognition we expect to find similar groupings of pictures across the two tasks.

We explore the resulting data visually using hierarchical agglomerative clustering. This type of cluster analysis produces trees called dendrograms, which are a heuristic aid to explore categorisation data (Borcard et al. 2011:63). We present dendrograms for our experimental data and discuss ways of exploring the clusters. Fig. 1 shows a dendrogram for the structured sort for Lewo: its three possessive classifiers – *drink*, *food* and *general* – are represented by three distinct clusters. We outline the different statistical methods that make use of heuristic data exploration to compare clusters across different dendrograms (Robinson & Foulds 1981; Fowlkes & Mallows 1983; Lapointe & Legendre 1995). The value of these methods is that they help us to establish how far the groupings made in the free sort (i) are similar to those made in the structured sort (ii). We then discuss how our findings bear on our RQs on the relationship between classifier categories and cognition.



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Unexpected orders in special cells: 1PL and 2PL forms in a Northern Venetan variety

Jacopo Garzonio & Enrico Castro  
<not updated>

### **Affix rivalry of Ancient Greek abstract nouns: A matter of domains?**

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Keywords: Historical Linguistics, Corpus Linguistics, Derivational Morphology, Lexical Semantics, Distributed Morphology

Ancient Greek exhibits a rich system of secondary nominal derivational morphology that is well studied in terms of Historical Linguistics but to a large extent it lacks the adoption of more recent theories and methods developed in the field of morphology. This paper aims to test the applicability of both, Lexical Semantics (LS) and Distributed Morphology (DM) for an ancient corpus language. The data is retrieved from the online corpus *Thesaurus Linguae Graecae* and complemented by Buck / Petersen (1984).

Within the set of mechanisms that create denominal abstract nouns in Ancient Greek, the rivalry of the highly productive suffixes *-osýnē* and *-ótēs* has gained much interest as they seem to encode the same range of meanings, but their distribution is hard to catch, cf. Schwyzler (1939: 491) and Wyss (1954) for classic descriptions.

In DM derivational affixes are merely phonological exponents that serve to spell out the grammatical information of the category-defining nodes (e.g., noun or adjective). On a first glimpse, the distributional behaviour of the suffixes in question can easily be described in terms of DM: *-ótēs* can be attached to a wide range of adjectival bases, especially those that are explicitly marked by productive prototypical adjective suffixes such as *-ro-*, *-lo-*, *-no-* or *-aleo-*. Its rival *-osýnē*, on the other hand, shows a strong tendency to be added only to certain primary stems, especially stems ending in a consonant and to the adjective suffix *-mo-*. That means, its bases are *listed*. Furthermore, the analysis of doublets shows a higher acceptance of *-ótēs* by the speech community and the latter one is also in use to recharacterise older abstract nouns that have become morphologically opaque (hypercharacterisation / affixal pleonasm).

DM has been challenged as a tool for explaining phenomena such as the ones in question by e.g., Baeskow (2012). In her detailed lexical study on English *-ness* versus *-ity*, she can demonstrate that suffixes as well as bases can in fact be described as carrying fine semantic nuances. The Generative LS approach, as it is used by Baeskow (2012) and Plag (2004), sees subtle lexical differences as crucial for determining the distribution of suffixes within the same category. Thus, the question may arise if the picture of Ancient Greek morphology, despite its corpus size, is impaired by insufficient data and limitations in analysing the semantics of the attestations as thorough as necessary. Therefore, the problem of analysing data retrieved from historical corpora will be briefly addressed in this paper as well.

In result, by analysing subcorpora of different times and genres carefully, it can be shown that pure combinatory behaviour can explain a big portion of the attested complex words, but it alone is not sufficient to cover doublets such as *hipp-osýnē* ‘the art of driving (esp. the war-chariot), driving, horsemanship’ versus *hipp-ótēs* ‘horse-nature, the concept of horse’. On the basis of such examples, it will be argued that the choice of *-osýnē* versus *-ótēs* is rather governed by the selection of different domains of their bases like scalarity, countability and value stressing.

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## Locative Alternation in Proto-Indo-European: A Lexical-Constructional Approach to Historical Semantics and Root Polysemy

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Keywords: construction grammar; historical linguistics; historical semantics; Indo-European; Proto-Indo-European.

As well known, Present Day English attests a class of so-called “locative alternation verbs”, which may “realize either a locatum (paint [...]) or a location (the wall [...]) in direct object position, as in (1) [...].

- (1) a. Jack sprayed paint onto the wall. (locatum-as-object variant)  
b. Jack sprayed the wall with paint. (location-as-object variant)” (Iwata 2008:1)

Far from being a peculiar feature of Present Day English, Locative Alternation (LA) is actually a widespread phenomenon already attested in Old English (Sówka-Pietraszewska 2019) and in several other ancient Indo-European (IE) languages, such as Ancient Greek (de Boel 2017) and Vedic Sanskrit (Kulikov 2017:383 with literature), as well as in other language families, e.g. in Japanese (Iwata 2008:169-205).

The aim of this paper is to make a case for the reconstruction of LA in Proto-Indo-European (PIE) and, perhaps more importantly, to argue for its relevance to the historical semantics of reconstructed roots that display polysemy, such as PIE *\*leug-* ‘bend; enclose; connect’ (*LIV*<sup>2</sup>:416) and *\*yel-* ‘turn; wind; cover’ (listed as two separate roots in *LIV*<sup>2</sup>:674-5). The analysis will be inspired by Iwata’s (2008) lexical-constructional approach to LA in English and Japanese, which manages to overcome several issues of previous accounts (e.g., Pinker 1989; Goldberg 1995) by taking into consideration constructions (stored pairings of form and function) both at the verb-specific level and at the level of semantic verb-classes. Within Iwata’s framework, the locatum-as-object construction is

thus identified as the reflex of an underlying PUT-like semantic conceptualization and the location-as-object variant as reflex of a COVER-like conceptualization.

As an example, one may mention the diversified semantics attested by Old Irish (OIr.) *in-loing* ‘connect, put’ (preterite *ellacht*) and Old Norse *lúka* ‘enclose’ (preterite *lauc*), two reflexes of PIE *\*leug-* ‘bend, twist’, which may be ultimately traced back to the locatum-as-object construction with PUT-like semantics (2) and the location-as-object construction with COVER-like semantics (3), respectively, of a single PIE infixed verb *\*lu-né-g-* ‘to bend/twist’. This and various other case studies will be extensively discussed and their implications for historical linguistics and for the reconstruction of Proto-Indo-European further explored.

Examples:

(2)

Occurrence: *ellacht imhuaim<sub>Y</sub> im rith<sub>Z</sub>*  
**put/connected** harmony.ACC around course.ACC  
 “He put/connected the harmony<sub>Y</sub> around the course<sub>Z</sub>” (RC xx,256,§61)

OIr. construction:

Form [*in-loing* ACC<sub>Y</sub> ACC<sub>Z</sub>]  
 Meaning “**move Y to fit** into/onto Z”

PIE construction:

Form [*\*lu-né-g-* ACC<sub>Y</sub> LOC/ACC<sub>Z</sub>]  
 Meaning “**put Y into/onto Z by bending/twisting it**”

(3)

Occurrence: *Lauc hann mic<sub>Y</sub> scioldom<sub>Z</sub>*  
**locked** he me.ACC<sub>Y</sub> shields.DAT<sub>Z</sub>  
 “He locked me<sub>Y</sub> with shields<sub>Z</sub>” (Hlr. 91–4)

ON construction:

Form [*lúka* ACC<sub>Y</sub> INSTR<sub>Z</sub>]  
 Meaning “**cause Y to have a layer of Z** around it”

PIE construction:

Form [*\*lu-né-g-* ACC<sub>Y</sub> INSTR<sub>Z</sub>]  
 Meaning “**make Y covered by bending/twisting Z** around it”

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## **Pragmatic competence in L2 Greek: A longitudinal study of Spanish and Catalan learners**

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Keywords: Interlanguage Pragmatics, Second Language Acquisition, speech acts, thanking, Greek as a Second/Foreign Language

During the last decades, Interlanguage Pragmatics (ILP) has gained increasing interest within the field of Second Language Acquisition (Usó-Juan & Martínez-Flor, 2008). ILP investigates the pragmatic competence of second/foreign language (L2) learners, with empirical studies mainly focusing on the production and comprehension of speech acts (Searle, 1969). Despite the considerable body of cross-sectional studies in this line of inquiry (Kasper & Rose, 2002), longitudinal research on pragmatic development is still scarce (Kasper & Schmidt, 1996 and Taguchi, 2010). In order to contribute to that direction, the current preliminary study employs a longitudinal design aiming to explore the development of the pragmatic competence of Spanish and Catalan learners of Greek as an L2.

The specific focus of the study is the speech act of thanking which has received little attention to date (Hinkel, 1994). Regarding Greek in particular, there are very few studies on how thanking is expressed by both native and non-native speakers. Despite this lack of research, the significance of thanking for interpersonal communication and the consequent challenges it poses for L2 learners have been repeatedly emphasized by many scholars (Coulmas, 1981; Eisenstein & Bodman, 1993; Jung, 1994 and Schauer & Adolphs, 2006).

A total of 60 (n=60) subjects participated in the study: 30 native speakers of Greek (who served as a baseline) and 30 L2 learners of Greek. The L2 learners studied the target language in a formal learning setting, in Barcelona, Spain and belonged to three different proficiency levels (beginner, intermediate and advanced). The study follows a pre/post-design, with data being collected at two time points: at the beginning (time 1) and at the end (time 2) of a 9-month course. The data were drawn from a series of open role-plays which represented various communication situations with different social parameters. In addition, a retrospective verbal report was used with the L2 learner group in order to gain insights into their sociocultural awareness and perception of pragmatic change. Finally, participants' biodata and background information were elicited by means of a questionnaire.

The analysis examined the head acts and external/internal modification devices employed by the participants when performing thanking. More specifically, we focused on the quantitative and qualitative differences in learners' pragmatic patterns that emerged between time 1 and time 2. Results showed certain changes in these pragmatic patterns. Furthermore, pragmatic development appeared to be related with L2 proficiency as well as individual factors. The social parameters of each communicative situation also appeared to play a role. The study concludes with pedagogical implications and with a discussion of the importance of explicit pragmatic instruction, especially in foreign language classrooms.

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## **Testing the Interface Hypothesis: Heritage speakers' perception and production of Spanish subject position with unergative and unaccusative verbs**

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**Keywords:** Interface Hypothesis; Spanish as heritage language; unergative and unaccusative verbs; syntactic-semantic interface; pragmatic-discursive interface

The Interface Hypothesis proposes that the pragmatic-discursive interface with syntax is more vulnerable to crosslinguistic influence than the syntactic-semantic interface (Tsimpili and Sorace, 2006). The present study tests this hypothesis by analyzing the contrast between preverbal and postverbal subject position with unergative and unaccusative verbs in the Spanish of heritage language (HL) speakers. Spanish subject position was used to test this hypothesis, as it is controlled both by the argumental structure of the predicates (unergative and unaccusative predicates select different subject

positions), which lies at the syntactic-semantic interface with syntax, as well as by the discourse contexts, in particular, the focus structure, which lies at the pragmatic-discursive interface with syntax. The results of a grammaticality judgement task and a short answer task contradicted the hypothesis: the syntactic-semantic interface is as vulnerable to the influence of English as the pragmatic-discursive interface for Spanish HL speakers. The grammaticality judgment task intended to tap into speakers' perception regarding subject placement in the sentence. In Zapata, Sánchez, and Toribio's (2005) contextualized preference task, the HL speakers appeared more 'native-like' in the contrast between unergative and unaccusative predicates (internal interface) than in the contrast between broad and narrow focus (external interface), while in De Prada Pérez and Pascual y Cabo's (2012) contextualized preference task the HL speakers showed a stronger English influence on the syntactic-semantic interface than on the pragmatic-discursive interface. The results of the grammaticality judgment task of the present study did not support the Interface Hypothesis for two reasons. First, they showed that HL speakers' perceptions of SV and VS orders resembled those of Spanish-dominant speakers. In order to focus the subject, in Spanish the subject can either precede the verb if marked prosodically in situ, or it can follow the verb. The HL speakers preferred the first option, but also accepted the second one. Second, the findings also showed that English influenced the HL speakers' grammaticality judgment, as they did not reject the English canonical subject order, suggesting that the syntactic-semantic interface was just as vulnerable as the pragmatic-discursive interface for these speakers. The short-answer task was administered to examine the participants' subject placement production. The results of the short-answer task, contra Gellon's (2015) elicitation data, did not support the Interface Hypothesis. HL speakers' production of subject placement seemed to be vulnerable to English influence, regardless of the interface. Of the 112 unaccusative verbs with a broad focus interpretation, 69.2% of the subjects were preverbal, which showed that the participants had a significant English influence on the syntax-semantics interface. Likewise, the subject position with unergative verbs in Spanish (SV with a broad focus versus VS with a narrow focus) drastically dropped from 95.2% to 13.5%, demonstrating that the present participants preferred the use of preverbal subjects with a narrow focus. Thus, it is plausible that they did not acquire both strategies Spanish has to focus the subject. The only strategy they acquired seemed to be the only one that English allows: the subject remains in situ and is prosodically marked.

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From egophoric to evidential and back again: Functional similarities of epistemic marking from the Tibetan Plateau and the Amazonian Foothills

Karolina Grzech & Erika Sandman  
<not updated>

## The Transitivity Index: A continuous measure of transitivity

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Keywords: transitivity, causatives, Spanish, Romance, random forest

Hopper and Thompson (1980) propose that transitivity should be modelled as a scale and not as a categorical property. They propose ten binary (*high* vs. *low*) parameters: PARTICIPANTS, KINESIS, ASPECT, PUNCTUALITY, VOLITIONALITY, AFFIRMATION, MODE, AGENCY, AFFECTEDNESS OF O, INDIVIDUATION OF O. However, not all of the parameters are likely to be equally important in every construction (Givón 1995, Malchukov 2006). In other words, the parameters lack hierarchical structure.

In this paper, I take the proposal that transitivity is a scale at face value and derive a continuous weighted measure of transitivity: **The Transitivity Index (TI)**. By virtue of being a *weighted* measure, the TI incorporates the underlying hierarchy among the parameters. Crucially, this hierarchy is not static but determined by the construction the index is applied to. The TI is used to study the Spanish causative constructions with *dejar* ‘let’ and *hacer* ‘make’ (1) on a dataset of 4589 sentences from Corpus del Español (Davies 2002).

1. a. Lo dejé/ hice dormir.  
‘I let/made him sleep’.

To calculate the TI 1000 random forests are fit on 20% of the data with the parameters as independent variables and CAUSATIVE as the binary dependent variable. Next, the variable importance is calculated for each random forest. The final weight for each parameter is the mean of the 1000 variable importance scores. With this procedure, we get a numerical value of each parameter weight and their ordering in importance as shown in Table 1. After this first step, all *high* values of the parameters are replaced with the numerical weights and all *low* values with zero. The final TI is computed by adding up all the parameters for each sentence and normalized to range between 0 and 1. The most important parameters in distinguishing the causatives are AFFIRMATION followed by AGENCY OF SUBJECT.

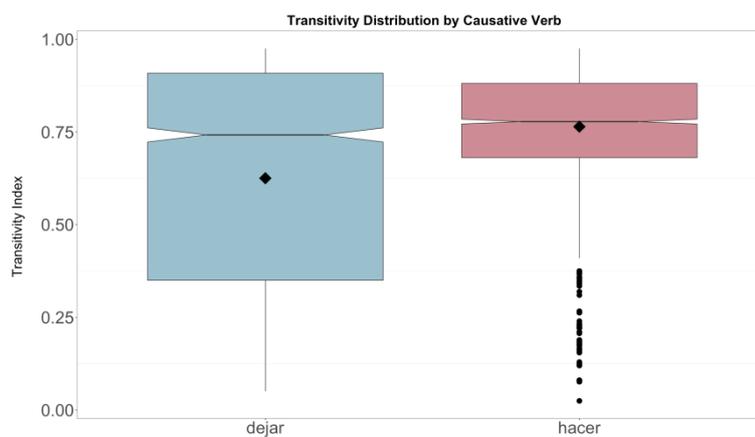
Parameter	Mean	Parameter	Mean	Parameter	Mean
AFFIRMATION	0.12965	PARTICIPANTS	0.01015	TELICITY	0.00047
AGENCY SUBJECT	0.04333	ANIMACY OBJECT	0.00410	COUNT	0.00039
KINESIS	0.02354	PUNCTUALITY	0.00128	AFFECTEDNESS	-0.00002
MOOD	0.01295	CONCRETENESS	0.00122	NUMBER OBJ	-0.00088

**TABLE 1** PARAMETER WEIGHTS IN DECREASING ORDER OF IMPORTANCE.

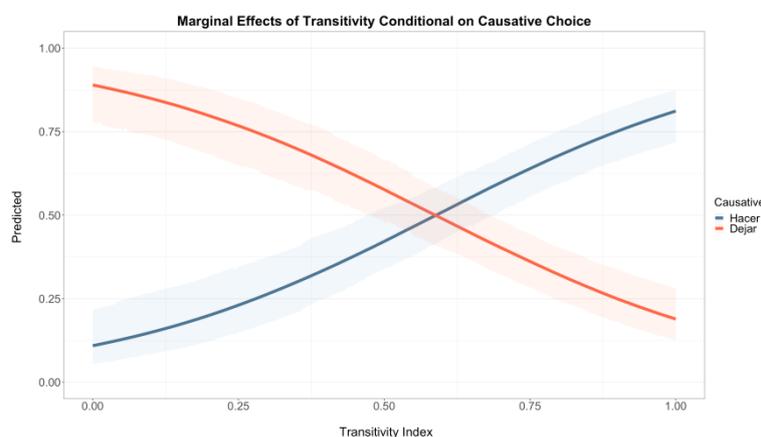
Fig 1 shows the distribution and mean of the TI. *Hacer* mostly appears in higher transitivity contexts whereas *dejar* covers a broader transitivity range, suggesting it can appear in a larger number of contexts. The mean transitivity for *dejar* and *hacer* is 0.63 and 0.76, respectively. A Mann-Whitney-Wilcoxon test confirms the difference is statistically significant ( $w = 2222658$ ,  $p < 0.0001$ ).

A mixed-effects logistic regression model was fit with the TI as a fixed-effect with a random slope on COUNTRY and VERB as a random intercept. Fig 2 shows the predicted probabilities of each causative as a function of the TI. As transitivity increases, the probability of *hacer* increases while that of *dejar* decreases. The model predicts the correct causative with 80% accuracy, indicating that transitivity is the most important factor distinguishing between the two causatives.

The TI adds hierarchical structure to Hopper and Thompson's parameters and has the potential to be used as a standard measure of transitivity within the same language and across different languages.



**FIGURE 1** DISTRIBUTION OF TRANSITIVITY BY CAUSATIVE



**Figure 2** Predicted probabilities of causatives per the transitivity index

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## Subjective modality and evidentiality in Czech in a Slavic perspective: complex developments and theoretical implications

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Key words: subjective modality, scope, hierarchy, Czech

This paper investigates the principles of modal developments across modal domains, particularly from so-called objective to subjective epistemic modality and evidentiality, and the capacity of modal models to account for these developments. The language in focus is Czech (i.e. western West Slavic), for which the adoption and change of modalities can be observed since late mediaeval times.

Modal systems in Slavic languages have been discussed in a comparative perspective especially by Hansen (2001, 2018) and e.g. Leiss and Abraham (2014) and Abraham (2020). Building on their valuable findings, this contribution focuses on (a) contemporary epistemic and evidential readings in the context of aspect, tense, person, language level and deictic perspective, and (b) an indicative historical case: development of *mít* ‘have’ in Czech, with remarks about medieval Slavic, Latin and German. Previously formulated hypotheses and models (also by Van der Auwera and Plungian 1998, Aikhenwald 2004, Plungian 2010) are discussed concerning their treatment of epistemic modality and evidentiality, and capacity to explain modal shifts.

The focus is on the development of subjective epistemic modality and evidentiality, illustrated by the following example of an intermediate stage in Czech, taken from *Život Krista Pána* (1360/1380).

- (1) *Zajisté toto jest prorok, jenžto jmá                      na tento svět přijíti*  
Truly this is prophet, who have:PRES.3SG on this world come  
‘Truly this is the prophet who is to come onto this world’

In West Slavic, the earliest attestations of subjective modalities exhibit an interface with Latin, followed by German since the late Middle Ages. It was particularly Latin which offered an already developed model for modals, on which German influences could be further shaped in a language-specific way.

This paper examines shifts across the modal domains of possibility vs. necessity in the sense of scope (predicate, predication or proposition), source of modality (internal vs. external) and source of information (direct vs. indirect). The results provide evidence for modal domains and layered structures in processes, and show at the same time that layered structures were more prevalently relevant and thereby determined the direction of change.

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## Emotional attractors in subject-verb number agreement

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Keywords: subject-verb number agreement, attraction, emotional words, ERPs

Subject-verb number agreement in Spanish and in many other languages conforms to the rule of having the number morphological features of the verb agreeing with those of the subject-NP. However, findings from the psycholinguistic literature show that agreement is not susceptible to influences coming only from the head noun nor only from syntactic ones: a *local noun* whose number mismatches that of the subject noun may act as an *attractor* leading to agreement errors such as *\*The key to the cabinets are...* (Bock and Middleton 2011), whereas *emotional information* carried by an antecedent in determiner-noun-adjective-verb structures can be considered by the parser and affect the detection of number agreement violations between an adjective and its noun (Martín-Loeches et al. 2012). Given that emotion and neurolinguistic theories postulate the existence of a network that contains both linguistic and emotional information (Pulvermüller 1999, Kissler et al. 2006, Keuper et al. 2013), in the present Event Related Potential (ERP) study we investigated whether the emotional content of words affects access to syntactic representations during subject-verb agreement processing or whether number agreement construction is insensitive to affective meaning. Twenty-eight Spanish native speakers participated in a reading comprehension task and their brain activity was recorded. The experimental materials consisted of 120 grammatical sentences where Valence (negative vs. neutral) and Number (singular vs. plural) of the local noun of the subject-NP were manipulated; *El gorro de aquel / aquellos cazador(es) / mecánico(s) era...* ('The hat of that / those hunter(s) / mechanic(s) was...'). Negative and neutral words were controlled for concreteness, word frequency, length, number of syllables ( $ps > .05$ ), and only differed between them with respect to valence and arousal ( $ps < .05$ ). ERP results measured in the local noun region showed that Valence and Number interacted at the 300-500 and 780-880 ms time windows. In the (target) verb region, the two factors only interacted at the late 780-880 ms time window, revealing that while an illusion of ungrammaticality was created by plural marked neutral words, such an illusion was not created for plural marked negative words. Our results suggest that emotional content affects lexical and syntactic representation retrieval of the subject-NP, while emotional effects over agreement encoding only occur at late stages of processing (Late Positivity) during verb agreement and feature integration. Overall, our findings show that emotional content affects more lexical retrieval than syntactic processing.

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Orthography: Leading part or minor part? The emergence of liaison in French as a foreign language

Elisabeth Heisenberger & Elissa Pustka  
<not updated>

## Norwegian Valence Dictionary (NorVal)

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Keywords: Norwegian, valence frame, entry per valence frame, entry for set of frames, grammar

The Norwegian valence dictionary *NorVal* is a comprehensive digital resource presenting the valence frames of 6300 Norwegian verbs. It has been co-developed with a large-scale computational HPSG-grammar (cf. Hellan-and-Bruland-2015, Hellan-et-al-2014), where all verbs and frames have equal focus for parsing adequacy, by which the dictionary as such thus has no particular bias in terms of meaning or construction types.

The number of frame types defined in *NorVal* is about 300, composed by features as defined in Hellan-and-Dakubu-2020, Hellan-2019,-2020a,-forthcoming, representing parameters such as:

- basic valence profiles like intransitive, transitive, ditransitive, copular, and more;
- argument parameters such as ‘direct’ vs. ‘oblique’;
- for an argument to be noun-headed vs. being an embedded clause (declarative, interrogative, or infinitival, in canonical or ‘extraposed’ position);
- occurrence of particles.

Regular alternations such as passive or noun-particle inversion are not represented.

Nearly half of the verbs are univalent, while the number of frames for multivalent verbs ranges from 2 to 30 frames. A valence dictionary thereby needs two kinds of entries, entries for *verb lemmas* (of which NorVal thus has 6300), and entries for *a verb with a given frame*, which we refer to as a ‘lexically instantiated valence frame’, for short ‘lexval’.

#### Format

The format of a *lexval* entry is illustrated by a lexval for *huske* ‘remember’, with the structure Lemma-SelectedItem(if any) \_\_FrameType:

(1) huske-på\_\_intrObl-oblDECL

This reads as a frame with the lemma *huske*, the selected item *på* (‘on’), and a frame type with an oblique argument whose item governed by the preposition (*på*) is a declarative clause (like in *Han husket på at det var søndag* ‘he remembered that it was Sunday’). The format of valence information here consists of strings with regular positions filled by labels representing arguments and their properties.

The format of a multivalent *verb lemma* entry is illustrated in (2), where each constituting lexval is represented with ‘V’ as placeholder for the lemma (‘EqSuInf’ for ‘infinitive equi-controlled by subject’); such a structure we call a *valpod*:

(2)  
*huske*:V\_\_intr & V-på\_\_intrObl-oblDECL & V-på\_\_intrObl-oblEqSuInf &  
 V-på\_\_intrObl-oblINTERR & V-på\_\_intrObl-oblN & V\_\_tr & V\_\_tr-obDECL  
 & V\_\_tr-obEqSuInf & V\_\_tr-obINTERR

The structure of a valpod is essentially a set, although represented with ordering conventions among its members (e.g., intransitives before transitives).

Counting lexvals in valpods together with those of univalent verbs, the total number of lexval entries is 15,600.

A valence corpus annotated according to NorVal is accessible online (cf. Hellan-et-al-2020).

#### Discussion

The compactness of the representation formats enables effective investigation of implicational relationships between frame types as taken by verbs and between valpods. It may also serve in formulating hypotheses concerning possible meaning dependencies between frames, frame clusters and verbs. Examples of search results and hypotheses will be offered in the presentation (cf. also Hellan-2020b).

A comprehensive valence resource like the present may allow us to address on a larger scale questions such as to which extent valence associations of verbs are shared across languages (linking to research like Malchukov-&-Comrie-2015, Hellan-et-al-2017, and to existing valence resources for other languages).

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Valence resources for other languages:

English: FrameNet; VerbNet; PropBank, with URLs: <https://framenet.icsi.berkeley.edu/fndrupal>, <http://verbs.colorado.edu/~mpalmer/projects/verbnet.html>

German: Evalbu; <http://hypermedia2.ids-mannheim.de/evalbu/>,

Czech: Vallex; <https://ufal.mff.cuni.cz/czengvallex>, <http://ucnk.ff.cuni.cz>, <http://ucnk.ff.cuni.cz>

Polish: Walenty, <http://clip.ipipan.waw.pl/Walenty>.

Bilingual: CzEngVallex <https://ufal.mff.cuni.cz/czengvallex>.

Multilingual: ValPaL <http://valpal.info/>

### ***I think, I hope, it seems: Complement-taking predicates as discourse markers in different registers in Estonian***

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Keywords: discourse markers, subjectivity, corpus pragmatics, language variation, Estonian language

The **topic** of our presentation is the use of epistemic and attitude-marking discourse markers which have developed from complement-taking predicates (CTP) in Estonian. We concentrate on six verbs: the most frequent subjectivity marker *arvan* ‘(I) think’, two opposites *loodan* ‘(I) hope’, *kardan* ‘(I)

am afraid’, and three synonyms: *tundub*, *näib*, *paistab* ‘(it) seems (to me)’, in seven registers: academic prose; print media; fiction; ordinary and institutional spoken interaction; instant messaging (IM) and Internet comments. There are only a few of studies of subjectivity which include a register-based dimension, and those works concentrate on a few registers only (e.g. Breitkopf-Siepmann 2012, O’Grady 2017). Our analysis fills this gap.

We have two **research questions**:

- a) How do registers cluster on the basis of usage frequency of different markers?
- b) Which contextual features explain the differences in the frequency of markers?

Our **data** come from the Estonian Language Corpora (<https://cl.ut.ee/korpused/>). We analyze the use of expressions that contain only marker material ((‘I/me’) + CTP + (‘that’)) and do not belong to the main thematic line of discourse in the text or conversation (Thompson 2002).

V: /.../ `millal sa siis võtmed saad=ju.

‘When will you get the keys then’

H: *ma=arvan et siis kui=mul seal `korter `üle antakse ju.*

‘I think when the apartment is handed over to me there’

Our **approach** is centered on usage-based and corpus-driven studies of discourse and registers. We combine quantitative and qualitative pragmatic analysis as **methods**.

Preliminary **results** reveal that the texts can be grouped into five clusters which differ in terms of the frequency of markers: 1) IM; 2) ordinary interaction and Internet comments; 3) institutional interaction; 4) fiction and print media; 5) academic prose.

The contextual features which explain the difference of the frequency of markers are dialogicity/monologicity, spontaneity/editedness, personality/impersonality, ordinary/institutional interaction, and text type: interaction/narrative/expository (comp. Biber, Conrad 2009; Jonsson 2015).

The use of other markers than *arvan* in spoken interaction and IM reveals additional key features.

First, although IM and spoken interaction share similar contextual features, spoken interaction uses far fewer CTP markers than IM, *arvan* dominates and the other markers occur rarely, while in IM the other markers are more frequent than in other registers compared. We explain this difference by two situational factors for spoken interaction: shared context and the far more limited time for text construction, as a result of which speech favors „general” markers fulfilling multiple functions (e.g. Rühlemann 2007). We hypothesize that *arvan* is a general marker which can replace the other particles more easily than the reverse.

Second, the CTP *tundub*, *näib*, *paistab*, which occur in oblique experiencer constructions, are used in spoken interaction as markers far less often than in other registers. The markedness of the sentence structure likely restricts the use of those markers in speech.

In our presentation we compare the results of the current study with our earlier study of epistemic and attitude markers. Both studies are part of a corpus pragmatic project in which we analyze the use of subjectivity/intersubjectivity markers in registers.

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## **The diachrony of inflection classes: what can information-theoretic measures and quantitative approaches contribute to historical linguistics?**

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Keywords: entropy, inflection classes, morphology, diachrony, paradigm

The Paradigm Cell Filling Problem (Ackerman et al. 2009) is one of the most pressing issues in morphological research. It asks how speakers of complex highly inflected languages are able to predict some/all forms in the paradigm on the basis of other forms, even in the presence of a skewed incomplete input. Information Theory (with its core notion of entropy) has recently provided the theoretical background for a lot of empirical research in this domain (Milin et al. 2009, Ackerman & Malouf 2013, Stump & Finkel 2013, Bonami & Beniamine 2016, Sims & Parker 2016, Cotterell et al. 2019...).

Despite the undoubted potential of these entropy metrics, and despite their increased popularity to analyze inflectional systems at the synchronic level, this overall approach has hardly been pursued to date in diachronically oriented research (cf. Cotterell et al. 2018, Herce 2020). This paper is meant as a first step in that direction, the principal questions being: Which inflection class quantitative traits are more variable, and which are more stable? Can the latter (more stable) properties be used diagnostically (e.g., can they provide a signal for cognacy where [traditional comparative] evidence is sparse)?

To assess the diachronic potential of the inflection-class (IC) complexity measures in Stump & Finkel (2013) (distillations, static and dynamic principal parts, average cell predictiveness, inflection class predictability, etc.) and others, a database of 100 cognate paradigms in 7 Romance varieties was constructed by expanding the data available in the Romance Verbal Inflection Dataset 2.0 (Beniamine et al. 2020). The result is 15000+ phonologically transcribed cognate forms. These were stemmed to remove the lexical material, and cognate tenses and verb forms were analyzed quantitatively in the online Principal Parts Analyzer website provided by Stump & Finkel (2013). The Romance measures were then compared to those from a cross-linguistic sample of IC systems.

The traits in Figure 1 show notable differences. Some of these metrics (e.g., signatures or static principal parts) and the IC aspects they capture appear to have comparatively broad ranges within Romance. Other traits appear to be remarkably stable, e.g., the number of inflection classes and the 4-MPS entropy (i.e., how difficult it is to predict a cell from a random set of  $\leq 4$  other cells). These traits’ variability within Romance is only 5% of the cross-linguistically observed one and appear to be, thus, comparatively stable in diachrony. This means they might well be the most promising ones for

diachronic explorations (e.g., they may be used as a diagnostic for IC or tense cognacy in deeper or under-researched families (e.g., Oto-Pamean), or to inform debates on (possible) deep genetic relations between families with ICs (e.g., Gunwinyguan and other families from Australia's Top End).

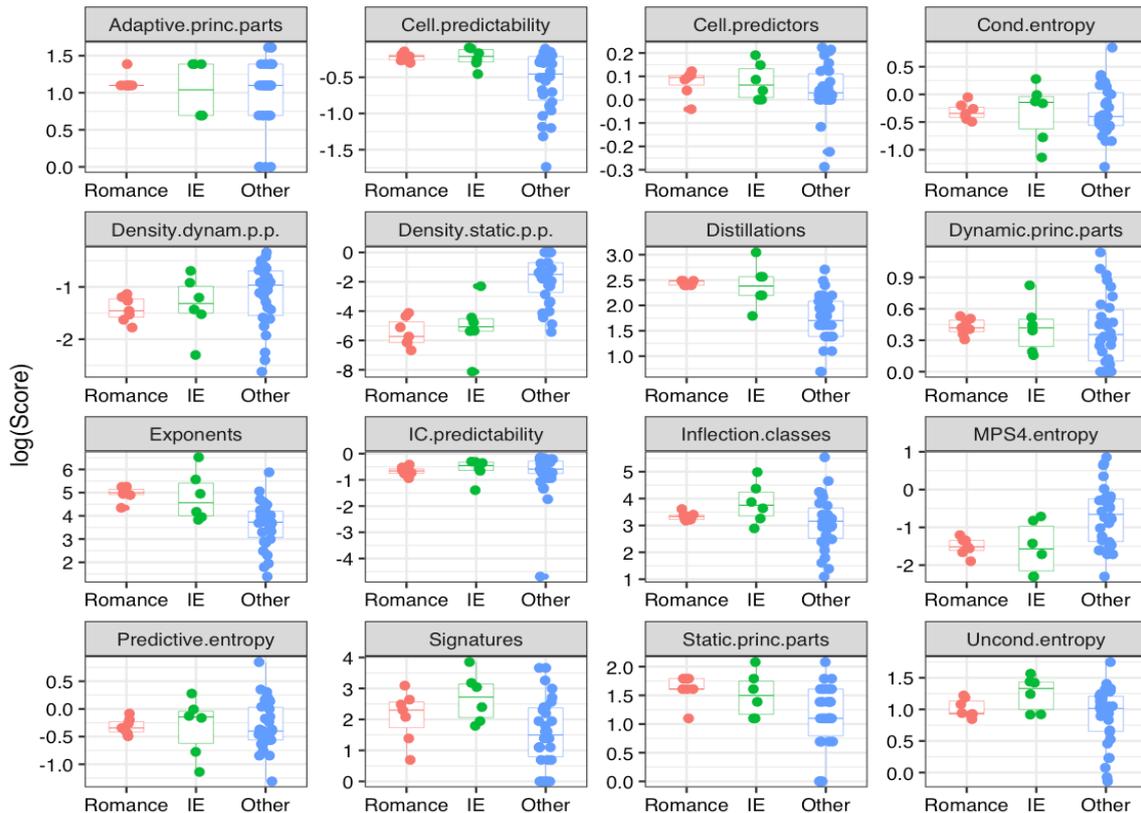


Figure 1: Romance IC's traits within the general cross-linguistic variability

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## A parallel text approach to impersonality in written academic Turkish and Kurmanji Kurdish

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Keywords: Turkish, Kurmanji Kurdish, impersonal constructions, academic language, parallel corpus

This paper undertakes a text-based comparison of impersonal constructions in an aligned parallel corpus of academic texts published in Turkish and Kurmanji Kurdish, two typologically distant languages, which, however, share a community of bilingual speakers/writers. ‘Impersonality’ refers to a way of presenting events from a perspective in which the agent, experiencer or speaker is demoted, i.e. removed from the focus of attention. In academic writing, impersonal constructions can fulfill stylistic functions of objectivisation and abstraction. While bordering on phenomena of ‘generalisation’ or ‘vagueness’, which also feature nonspecific agents, ‘impersonalisation’ is characterised by the specificity of the surrounding situation. Functional concepts drawn upon in this connection are: subject- and agenthood (Siewierska 2008a, b), actant representation (Johanson 1990), agent demotion (Blevins 2003), and specificity (Johanson 2006).

Cross-linguistic models of impersonality (Malchukov & Siewierska 2011, Malchukov & Ogawa 2011), inventories of constructions in Turkish (Akar 2011, Csató 2010) and Iranian (Jahani & Viberg 2010, Jahani, Axenov, Delforooz & Nourzaei 2010, Jahani, Delforooz & Nourzaei 2012), as well as text-analytical approaches (Hohenstein 2012, Kameyama 2012) are used to identify relevant constructional types for contextual analysis.

In the data under investigation, agents, experiencers, speakers and observers are impersonalised. A preliminary inventory of forms includes: (1) lexical nouns, such as Turkish *insan*/ Kurmanji *mirov* ‘man, human being’, (2) impersonal passives, (3) second-person impersonals, (4) third-person-plural impersonals, (5) abstract nominals in subject role. These construction types are unevenly distributed between the two languages. One central result is a higher frequency of passive constructions in the Turkish text versions (example 1); in the Kurmanji versions, these are rendered by means of a larger variety of constructions, e.g. active intransitive verbs as in (2):

- (1) *Kaynakların eşit bir şekilde paylaştırılmaması, [...] veya [...]*  
 re source-PL-GEN equal one form-LOC share-PAS-NEG-VN-POSS.3SG or  
*ihmal yoluyla şiddet’e örnek gösterilmektedir.*  
 omission way-POSS.3SG-INS violence-DAT example show-PAS-VN-LOC-COP  
 ‘The unequal distribution of resources and [...] or [...] constitute examples of violence by omission’  
 (KA\_025\_tur\_o\_081, KA\_025\_eng\_t\_083f).
- (2) *Parvenekirina çavkaniyan, [...] yan jî [...] numûne ne ji*  
 share-NEG-DO-VN-EZF.F resource-OBL.PL or example be.PRS.3PL of  
*şiddeta ji.ber îhmalê*  
 violence-EZF.F because.of omission-OBL.F  
 ‘The unequal distribution of resources and [...] or [...] constitute examples of violence by omission’  
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## Semantic contrasts in deictic motion between Modern Greek and Spanish

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Keywords: deixis, semantic typology, motion events, contrastive linguistics, cognitive linguistics

The focus of this study is on the semantic differences in how deixis is expressed in Modern Greek and Spanish. In particular, the focus is on voluntary and causative deictic motion verbs. The study of these verbs is of particular interest because their interpretation depends on the special location of speech act participants (Fillmore 1983). Gathercole (1977, 1978) establishes a typology of the expression of deictic motion verbs across languages. The venitive verbs (i.e. *come*) can be used to express direction towards the speaker and the addressee in some languages (e.g. English), while in others the venitive verbs can be used exclusively for motion towards the speaker (e.g. Japanese). These differences in the encoding of deixis may impact on the thinking-for-speaking patterns (Slobin 1996).

The contrast among these two languages is relevant for several reasons. First, Modern Greek allows both interlocutors as a deictic center whereas Spanish allows only the speaker to play this role (Gathercole 1977, 1978). Second, Modern Greek presents specificities with regard to accompaniment situations (e.g. Would you like to come/go to the party?), where the verb chosen will imply the presence (COME) or absence (GO) of the speaker (Bella 2001, and Antonopoulou & Nikiforidou, 2002).

This study aims to describe and comparatively present the differences between the use of deictic verbs in these languages: Greek *πάω* /pao/ 'go', which in combination with a direct object can be used as 'take', *έρχομαι* 'come', and *φέρνω* /ferno/ 'bring, take'; and Spanish *ir* 'go', *venir* 'come (only towards the speaker)', *llevar* 'take' and *traer* 'bring (only towards the speaker)'. Data were elicited by means of two online fill-in-the-blanks written activities in both languages, which included several situations and participants were asked to complete texts with a single word. Each activity included 30 items (10 of them were distractors) and participants were functional monolingual Greek and Spanish speakers. More than 500 participants (n=500) took part in the study.

Results showed important differences in the use of deictic motion verbs in both languages. The study has implications for motion events typology (Talmy 1991, 2000), examining semantic elements such as deixis. Robinson and Ellis (2008) argue for the difficulty of re-thinking-for-speaking semantic differences in motion events, that is, typological differences are difficult to re-adjust when they are acquired as a second language. In this sense, this study can lay the foundations for a more in-depth study on how deictic motion verbs are acquired by learners of a second language.

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## **Assessing irregular and “sporadic” developments in the prehistory of Hungarian vocalism**

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Keywords: Hungarian, Uralic, historical phonology, vocalism, etymology

In the research on the historical phonology of Hungarian and other Uralic languages, there has been a tradition of stressing the “sporadic” nature of sound change and tendencies instead of sound-laws (see e.g., E. Abaffy 2003: 108–109 and Honti 2013: 6, see Aikio 2015: 28–29 for criticism). As a result, many details in the prehistory of Hungarian are insufficiently known, and the Proto-Uralic reconstructions of traditional etymological sources, such as UEW, should be regarded as highly uncertain, especially regarding the vocalism. On the other hand, the Finnic languages have played a disproportionately big role in Uralic reconstructions (see Kallio 2012: 172), and often the Finnic vocalism has been projected to Proto-Uralic without critical assessment. The evidence from related languages, such as Hungarian, has been fitted into these biased reconstructions, leading to a skewed picture.

In this paper the problems of Hungarian historical vocalism will be investigated in the light of recent developments of Uralic historical phonology (see Aikio 2015). It is shown that reassessment of the Hungarian historical phonology will lead to a more balanced picture, and that the history of Hungarian can and should be approached through regular sound-changes instead of resorting to obscure tendencies.

The case-studies investigated here are the Proto-Uralic background of the correspondence Finnish *u* or *uu* ~ Hu *a* (for example, Fi *kulki-* ~ Hu *halad* ‘to proceed’ < ? PU *\*kulki-*; Fi *puu* ~ Hu *fa* ‘tree’ < ? PU *\*puwi*) as well as the reflexes of the Proto-Uralic vowel-glide sequences (such as *\*aw*, *\*aj*, *\*jw*, *\*j*) in Hungarian. The concrete research questions are: 1) does the correspondence Fi *u(u)* ~ Hu *a* go back to PU *\*u* (as assumed in most cases by the UEW) or can it be explained otherwise; and 2) what are the regular reflexes of the PU sequences of a vowel and a glide in Hungarian. The data consists of the Uralic etymologies of UEW that display these correspondences, as well additional etymologies of more recent sources (such as Abondolo 1996 or Aikio 2015). These etymologies are

investigated in the light of current views of Uralic sound-laws as well as revisited comparative evidence from other Uralic languages, such as the Ob-Ugrian and Samoyed languages.

Preliminary results show that most of the instances of PU \**u* > Hu *a* are incorrect, as in most cases it is only Finnic that points to *u*, whereas Hungarian agrees with the comparanda of the other Uralic languages. However, the few remaining instances (such as PU \**kulki-* > Hu *halad*) can be explained as conditioned changes (such as \**u* > *a* after \**k*).

Reinvestigating the sound-laws for Hungarian is important not only for Uralic historical linguistics, but this will serve as a case study that is useful for historical linguistics in general, as it shows that moving away from “key languages” and stricter methodological principles can have big impacts on reconstruction.

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Competition in the history of English verbal argument structure: NPs vs PPs

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<not updated>

DOM co-occurrence restrictions in Romance: beyond clitic clusters

Monica Irimia

<not updated>

## Proto-Ryukyuan ‘rice’ words and the spread of Japonic into the Ryukyu islands

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**Keywords:** archaeolinguistics, Proto-Ryukyuan, Japonic, language spread, farming vocabulary

The question of arrival of the Japonic-speaking population in the Ryukyus, usually associated with the origins of Ryukyuan subsistence agriculture, has been a subject of multidisciplinary discussions (cf. References). Although the general consensus seems to be that Japonic spread to the Ryukyus starting in the *gusuku* period around 10th century CE, along with a large movement of Mainland – specifically, Kyushu – Japanese people to the Ryukyus (Karimata 2019), questions such as the incentive for such movement or the route of the migrants remain unresolved.

Linguistically, with the help of Miyake’s (2003) absolute dating of mid-vowel raising in Western Old Japanese, the latest possible timing of the split of Mainland Japanese and Ryukyuan can be estimated at mid-6th century, meaning at least four centuries before the inception of the *gusuku* period. Why would the Pre-Proto-Ryukyuan speakers only then move to the Ryukyus?

These questions will be addressed in the present paper through a comparative analysis of Ryukyuan words indicating ‘rice’. The present study has brought the following Proto-Ryukyuan reconstructions.

\**mapi* ‘rice plant’, ‘rice grain’ and ‘rice meal’, a Ryukyuan lexical innovation, although likely related to Old Japanese *mapi* ‘gift, offering’. While \**mapi* is not attested elsewhere in Japonic as a standalone lexeme, it is fossilized in compounds in a number of insular South Kyushu topolects, which supports the hypothesis of South Kyushu origins of Proto-Ryukyuan speakers (Jarosz 2019);

\**jone* ‘cereal grain, threshed grain’;

\**ine* ‘cereal plant, especially rice’.

Based on the semantics of their reflexes in daughter languages, Proto-Ryukyuan \**jone* and \**ine* can be argued to have respectively indicated *any* kind of ‘cereal grain’ and ‘cereal plant’.

By contrast, cognates of Japanese *kome* ‘rice grain’ are limited to North Ryukyuan, and only to those areas which do not have \**mapi* ‘rice grain’. In all likelihood, this indicates a borrowing which occurred only after Proto-Ryukyuan had split into the North and South groups.

Karimata (2019) claims there were two waves of Japonic migration into Ryukyus: one around 10th century, another during an unspecified later period. While this indeed seems to have been the case, the dating should rather point at roughly 7th (the earliest cereal remains are dated for the 8th century) and 10th centuries.

Although wave one may have brought some farming knowledge into the islands, it had not instigated a shift to a farming society (Crawford 2011). Rice was likely considered mostly a tax crop, as hinted at by the putative etymology of \**mapi*. Since wave one chronologically coincides with the centralization of the power of the Yamato state in mainland Japan, this corroborates Hudson’s (2020) view that escaping state control may have been what motivated the Pre-Proto-Ryukyuan speakers to leave their Southern Kyushu homeland.

Accordingly, larger-scale farming and a consequent shift to an agricultural society only happened in the *gusuku* period through the second wave of Kyushu migration. This was likely also the period when Proto-Ryukyuan had split, as well as when the word \**kome* was introduced along with a Mainland-style agriculture with wet rice cultivation at its center.

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## Complex NP island effects are stronger in *why*-questions: An experimental study

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Keywords: East Asian *wh*-in-situ, strong island effects, argument-adjunct asymmetry, experimental syntax, *why*-question

It has been controversial in the island literature which type of *wh*-phrase incurs island violations in Mandarin Chinese *in situ* questions. Some proposals argued that island-sensitive items comprise *wh*-adjuncts (Huang 1982; Tsai 1994; Fujii & Takita 2007), defined in terms of structural category (Stepanov & Tsai 2008), restriction of nominal variables (Reinhart 1998), semantic referentiality (Szabolcsi & Zwarts 1993) or D-linking (Pesetsky 1987). Such proposal predicts that *why*-questions and manner *how*-questions pattern **similarly** in island contexts, their degradations being non-significant from each other. An alternative proposal claims that the *why*-adjunct **uniquely** gives rise to island effects due to its idiosyncratic attachment position (Lin 1992; Jin 2015; Murphy 2017). Hence, it predicts that *why*-questions induce a significantly more severe degradation compared with manner

*how*-questions in island contexts. The present study shows the latter proposal is supported by an offline acceptability judgment task.

**Stimuli** For each of the 15 stimuli, 3 sentences have been generated according to the 3 conditions: A) *why*-question B) *how*-question C) *who*-question (The argumental *who*-question serves as the control, eliciting no island effects), all within a relative clause context to probe the CNPC island effects. Table 1 provides sample stimuli across conditions. A sentence explicitly enumerating members of the corresponding domain (individuals, manners, reasons) precedes each target stimulus to serve as the immediate QUD and an exhaustive answer follows each stimulus, so as to make sure that the contextual parameter is identical across conditions.

**Table 1: Sample target stimuli across three conditions**

A) <i>who</i> -relative condition	Guke jueding mai <b>shei</b> zuo de dianxin? customer decide.to buy <b>who</b> made REL pastry 'Who <sub>i</sub> did the customer decide to buy the pastry that [t <sub>i</sub> made]?'
B) <i>how</i> -relative condition	Guke jueding mai shangdian <b>zenme</b> zuo de dianxin? customer decide.to buy supermarket <b>how</b> made REL pastry 'How <sub>i</sub> did the customer decide to buy the pastry that [the market t <sub>i</sub> made]?'
C) <i>why</i> -relative condition	Guke jueding mai shangdian <b>weishenme</b> zuo de dianxin? customer decide.to buy supermarket <b>why</b> made REL pastry 'Why <sub>i</sub> did the customer decide to buy the pastry that [the market t <sub>i</sub> made]?'

**Participants and Procedure** 18 participants rated the acceptability of 15 target stimuli and 15 fillers from 1 (completely unnatural) to 7 (very natural) on a Likert scale presented on Qualtrics. The stimuli were presented to each participant based on a Latin square design.

**Results** No significant effect is observed between the mean ratings of the *who*-question and the *how*-question conditions ( $\beta=0.198\pm 0.14$ ) by an ordinal mixed model (Tukey  $\alpha$ -adjustment) consisting of a random intercept for participant and item and a random by-participant slope for conditions. Compared against either of these two conditions, a significantly lower rating for the *why*-question condition ( $p<0.001$ ) is observed by the model.

**Discussion** Results from the acceptability task on CNPC islands provide initial evidence that the causal *why*-adjunct induces significantly stronger island violations than manner *how*. The finding that manner *how* patterns with argumental *wh*-phrases under explicit contextualization supports the view that *how*'s mild island violations in out-of-the-blue contexts are d-linking effects. In addition, we fail to corroborate Stepanov & Tsai's (2008) claim that *how* is island-sensitive under a manner reading and only escape islands under an instrumental reading. Consequently, the results undermine the proposal to formulate East Asian *in situ* islands in terms of an argument-adjunct asymmetry, and instead justify efforts to derive island effects based on the wide scope taking property of causal interrogatives (Bromberger 1997; Murphy 2017).

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## Semantics of Locative Instruments in English

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Keywords: semantics, syntax, instruments, syntactic alternation, locative phrase

The semantics of instruments preceded by the preposition *with* (1) has received much attention in the literature (cf. Nilsen 2019). However, considerably less has been said about the semantics of instruments expressed as locative phrases (2) (cf. Levin 1987). This paper is concerned with the semantic motivations for the realization of instruments as locatives or *with*-phrases in English.

(1) *He bent the rod with a sharp rock.*

(2) *He bent the rod on a sharp rock.*

Levin (1987) poses a semantic dichotomy between the two syntactic variants (1-2) and argues that the *with*-phrase designates an instrument that is directly manipulated by the agent as a “controlled object,” while the locative phrase does not specify any control relation between the agent and instrument. This paper carries out a qualitative corpus-based study that builds on Levin’s thesis and addresses the complexity of the topic at hand. The analysis identifies relevant semantic parameters that determine the use of one syntactic variant over the other and includes examples from the following verb classes: Change of State, Hurt, Cooking, Force, General Motion, Carry, Vehicular Motion, Conceal, Performance, Perception, and Communication.

The data indicates that prototypically, an instrument is syntactically realized as a *with*-phrase (4) when it is directly manipulated by the agent and it moves. The patient in this semantic frame is stationary. In

contrast, instruments that are prototypically expressed as locative phrases (5) are stationary and are not directly manipulated by the agent. The patient, rather than the instrument, moves in such events.

(4) *Daddy cuts the cord **with a knife** and opens the package.*

(5) *I had scratched my arm **on the cage door**.*

The corpus analysis reveals that the full range of semantic parameters that determines the syntactic realization of instruments is not always available. However, speakers' choices about the syntactic realization of instruments in events that deviate from the above defined prototypes still appear to be motivated by the same parameters.

For example, in (6), the locative phrase is used in a situation in which an instrument is directly manipulated by the agent. However, the use of the locative phrase is motivated by the stationary character of the instrument. In (7), the *with*-variant is used for an instrument that is not directly manipulated by the agent. This syntactic choice is likely motivated by the instrument moving towards the patient in the event.

(6) [...] *James Lee rapelled **on a rope** from a rooftop to rescue an elderly man [...]*

(7) *You don't put on a seat belt, you'll **hurt your face with the airbag**.*

(8) *Maybe the victim fell and hit his head **on the edge of the boat**.*

With Force verbs, the 'controllability' of the instrument is tied to the contextual inference of an accidental action. Verbs such as *hit* don't usually occur with locative instruments (*\*He hit the rock with a stick/He hit the rock on a stick*). However, it is possible to express the instrument as a locative phrase if the event happened accidentally, as shown in (8).

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## The Latvian vocative – morphology and syntax interface

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Keywords: vocative, nominative, accusative, morphology, syntax, agreement

The objectives of this study are threefold: 1) to catalogue the different kinds of vocative forms found in Latvian; 2) to provide an analysis of Latvian vocative constructions and their underlying models,

i.e. the principles according to which Latvian vocative phrases are structured; 3) to examine the relationships between the vocative, nominative and accusative forms within vocative expressions.

Latvian vocative forms are complicated in that they lack homogeneity across declension classes and in addition to the morphological vocative case (1)-(3) there are also syntactic vocatives, i.e. nominative (4a) and, less frequently, accusative (4b) forms functioning as vocatives (Nītiņa, Grigorjevs 2013; on vocative–nominative and accusative syncretism also see, Blake 1997; Baerman 2009) (Table 1).

- (1) declension classes 1, 4, 5:  $-\emptyset$   
*Labvakar, tēv- $\emptyset$ !*  
 good\_evening father-VOC.SG  
 ‘Good evening, father!’ (A. Eglītis)
- (2) declension class 2: the ending *-i* or its truncation  $-\emptyset$  (Paegle 2003; Holvoet 2012)
- a. *Jā, mans brāl-i, [..]*  
 yes my.NOM.SG brother-VOC.SG  
 ‘Yes, my brother, [..]’ (LVK2018)
- b. *Esmu atnācis, brāl- $\emptyset$ !*  
 have.AUX.PRS.1SG come.PTCP.NOM.SG brother-VOC.SG  
 ‘I have come, brother!’ (www.korpuss.lv)
- (3) declension class 3: the ending *-u*  
*Ak, Jēz-u, glāb mani!*  
 of Jesus-VOC.SG save.IMP.2SG I.ACC  
 ‘‘Oh, Jesus, save me!’’ (I. Ābele)
- (4) a. *Dēl-s, tu dzirdi mani?*  
 son-NOM.SG you.NOM.SG hear.PRS.2SG I.ACC  
 ‘Son, do you hear me?’ (G. Priede)
- b. *Mamm-u, kur mums stāv putekļsūcējs?*  
 mum-ACC.SG where we.DAT keep.PRS.3 vacuum\_cleaner.NOM.SG  
 ‘Mum, where do we keep the vacuum cleaner?’ (Ieva)

SG	1	2	3	4	5	6
VOC	$-\emptyset$ ,	$-i$ , $-\emptyset$	$-u$	$-\emptyset$ ,	$-\emptyset$ ,	-
+NOM, ACC	$-s$ , $-š$ ,			$-a$ ,	$-e$	$-s$
	$-u$			$-u$	$-u$	
PL	1, 2, 3			4	5	6
NOM	$-i$			$-as$	$-es$	$-is$

Table 1. Case endings: the vocative case and other forms functioning as vocatives

Typologically, Latvian falls within the group of languages having a distinct vocative case (morphologically marked by means of an ending) used for direct address (e.g., Blake 1997; Moro 2003; Daniel, Spencer 2009; Parrot, 2010). Although, because of its specialised direct-address function, the vocative case is a textual (discoursal) phenomenon it is capable of binding other words (Daniel, Spencer 2009; Hill 2013, 2014), examples (2a), (5)-(8).

It might be expected that in agreement-based vocative-headed phrases an agreeing attribute expressed by an adjective, a numeral, a declinable participle or a possessive pronoun would also be in the vocative case, since the above parts of speech, which require gender, number and case agreement with a noun, are the so-called morphological controllers symmetrically mirroring the forms of the head

(e.g., Plungian 2011). This is not, however, the case: Latvian vocative phrases headed by a noun in the vocative case usually have nominative dependents, i.e. agreeing attributes (Nītiņa, Grigorjevs 2013):

- (5) “*Mīl-ais Fīlip-ø!*”  
**dear-NOM.SG Philip-VOC.SG**  
 “‘Dear Philip!’” (A. Eglītis)

The accusative case is also possible, with the same meaning (Nītiņa, Grigorjevs op. cit.):

- (6) *Mīl-o, dārg-o māsiņ-ø!*  
**beloved-ACC.SG dear-ACC.SG sister-VOC.SG**  
 ‘Beloved, dear sister!’ (LVK2018)

In vocative phrases headed by a noun in the nominative case the dependents are in the nominative:

- (7) *Cienīt-ā kundz-e!*  
**dear-NOM.SG madam-NOM.SG**  
 ‘Dear Madam!’ (A. Eglītis)

Less common are vocative phrases with an accusative agreement where both the head and the dependent are in the accusative case. Accusative agreement often occurs with the word *mamma* ‘mum’:

- (8) *Mīl-o mamm-u!*  
**dear-ACC.SG mum-ACC.SG**  
 ‘Dear mum!’ (LVK2018)

Hence, true agreement is only found in examples (7), (8). The rest involve an adjective (or a word of another declinable part of speech) in the nominative or accusative case which is subordinate to a noun in the vocative case, examples (5), (6). Thus, morphological agreement is found in vocative phrases headed by nouns in the nominative or accusative case functioning as vocatives. Vocative phrases headed by nouns in the vocative case lack phonological and morphological agreement.

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## Three types of existential constructions in Greek: Their distribution and syntax

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Keywords: existentials, have, be, transitivity, prepositional phrase

This presentation aims to present and explain the syntactic distribution and the semantic properties of existential sentences in Greek. The term *existential* refers to “a specialized or non-canonical construction which expresses a proposition about the existence or the presence of someone or something” (McNally 2011). Under this definition, English *there-is*, French *il-y-a*, Spanish *hay* sentences etc. have been studied as typical examples of existential sentences. Typological research (Clark 1978, Creissels 2014) claims that Greek is a language that exploits a HAVE verb, namely the impersonal form *exi*, marked with invariable third person singular morphology. However closer investigation shows that there are at least three constructions in Greek which qualify as existential. Here I will restrict myself to sentences that include only PP-codas. Apart from the HAVE construction, Greek also employs a BE (*ine*) existential and an existential based on the verb EXIST (*iparxo*):

1. Exi            markadorus    sto trapezi.  
Have-3SG. markers-ACC. on-the table.
2. Ine/Iparxun    markadori    sto trapezi.  
Be-3PL./Exist-3PL. markers-NOM. on-the table.  
'There are markers on the table.'

In this presentation I will first argue that all three of them show the Definiteness effect and a case-marking difference on the post-verbal nominal. Second, I will discuss how their semantic and pragmatic properties influence the choice of the relevant constructions in different contexts. Specifically I will argue that the type of relationship between the nominal and the location i.e. whether it is pragmatically well-established or not, determines the preferences of the speakers with respect to verb choice, such that *iparxo* is preferred over *exi* which is preferred over *ine*. Moreover, *exi* and *iparxo* sentences can have additional interpretations that are not licit in *ine* constructions. Finally there are cases in which existentials are infelicitous and possessives must be used instead.

In the second part of the presentation I will provide an account for the distribution of different types of existentials in Greek. Based on tests from the literature (McNally 1997, Freeze 2007) I will argue that the predication relation between the nominal and the location (PP) has distinct properties in each construction. Crucially, the post-verbal nominal in *exi* and *iparxo* sentences is in a predication relation with a covert element, and the overt PP is an adjunct modifying it. On the other hand, the overt PP in *ine* constructions is a predicate. I will discuss further differences in the structure of *exi* vs *iparxo* constructions, most notably the fact that an implicit location is a subject in *exi* and a predicate in *iparxo* sentences. I will argue that the Greek data lend support to the proposal that HAVE is the transitive variant of BE as recently proposed by Myler (2016, 2018). From a crosslinguistic point of view Greek is interesting for two reasons: a) it productively has both BE and HAVE existentials unlike most languages which employ either BE or HAVE, b) it is quite unique in making systematic use of the verb EXIST in the formation of existential sentences.

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## Inverse marking as a type of object agreement: Evidence from Chukchi

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The existence of inverse morphology, which appears to access a relationship between arguments rather than indexing one or both of them, poses a problem for morphosyntactic theory. It is not obvious how a morpheme can realize a process (such as one which compares the features and semantic roles of a verb's arguments according to a hierarchy). One way to resolve this is to posit that “inverse” marking is simply the morphological result of processes that occur in the syntax, but does not directly encode them. I follow Oxford's (2019) approach to Algonquin and propose a similar analysis of inverse agreement in Chukchi, an endangered polysynthetic language of Siberia. I argue that there is no true inverse in Chukchi: rather, it is a kind of neutral object agreement that surfaces where the expected object agreement is blocked. Most of these situations can be described as inverse combinations, where the object outranks the subject on a feature hierarchy (1>2>3sg>3pl). However, many of the scenarios cannot be interpreted as the result of a hierarchy violation (e.g., in direct combinations), but where object agreement has failed for other reasons.

Chukchi displays both subject and object agreement:

- (1) AGR<sub>1</sub>/MOOD-TENSE-(INV)-STEM-ASPECT-AGR<sub>2</sub>

AGR<sub>1</sub> always agrees with the subject; AGR<sub>2</sub> agrees with the object in transitive verbs, or redundantly agrees with the subject in intransitives. There are also portmanteau morphemes (indicating 3-3 combinations) that slot into AGR<sub>2</sub>. Whenever the “inverse” marker is present, the suffix slot agrees with the transitive subject.

We can see that suffixal agreement is sensitive to the features of both subject and object, motivating an agreement process that accesses both arguments simultaneously (Multiple Agree; Hiraiwa 2001). Assuming that *v* is the site of object agreement (the suffix slot) and Infl is the site of subject agreement (the prefix slot) (Baker 2008), I propose that *v* probes both arguments, with

Impoverishment occurring in certain featural combinations. Since the suffix slot must receive agreement features, it is filled with those of the subject, while the object surfaces as an underspecified form (*ine-/tku*).

<p><b>Intransitive:</b> <i>v</i> Agrees with the subject  <i>t-alʔeqatə-k</i>          1sgS-swim-1sgS          ‘I swim’</p>	<p><b>Direct transitive:</b> <i>v</i> probes both subject and object, only expresses object features  <i>tə-lʔu-gʔen</i>          1sgA-see-3sgO          ‘I see you’</p>
<p><b>Portmanteau transitive:</b> <i>v</i> probes both subject and object, expresses features of both    <i>ø-lʔu-nin</i>          3sgA-see-3sgA.3sgO          ‘He saw him’</p>	<p><b>Inverse transitive:</b> <i>v</i> probes both subject and object, object agreement is blocked (<i>v</i> Agrees with the subject, separate default OBJ marker)    <i>ø-ine-lʔu-gʔi</i>          2sgA-OBJ-see-2sgA          ‘You see me’</p>

Table 1: Distinct agreement patterns in Chukchi

A key advantage of this proposal is that it explains why the “inverse” shows up in unexpected places, e.g., in direct argument combinations in the habitual tense, where a sole agreement slot is repurposed for agreement with the highest argument on the hierarchy. It also explains the homophony between the “inverse” and the antipassive, which is syntactically identical to syntactic object incorporation. Treating the antipassive as an underspecified object affix elegantly bridges the syntax of these two constructions without additional machinery.

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## Cognate accusative noun phrases in the Quran: A contribution to the discussion on cognate objects

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Keywords: cognate object, Quranic Arabic, manner adverbials, function of accusative case

In the past four decades a great number of studies emerged on cognate objects (COs) in different languages, e.g. in English (Jones 1988; Sailer 2010), Italian (Melloni et al. 2017), or Russian



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## **Small and cute? Small and bad?: Semantic network of diminutives in Thai and Korean**

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Keywords: Diminutive, Semantic Extension, Evaluative, Thai, Korean

Diminutive lexemes typically undergo a range of semantic or functional extension either as free-standing lexical forms, or weakly-grammaticalized derivational morphemes, or even fully grammatical forms (such as classifiers). There is a body of literature analyzing diminutives in individual languages (Matisoff 1991, Rhee 2001, among others) and across languages (Dressler and Barbaresi 1994, Jurafsky 1996). However, comparative analyses between typologically distinct languages have been

largely underrepresented, and this research intends to fill this gap, with an isolating language (Thai) and an agglutinating language (Korean). For comprehensive collection of the diminutive lexemes and semantic analysis, various lexicons, dictionaries, thesauri, and drama corpora were consulted.

Thai has a large number of lexemes denoting ‘small’, e.g. *luk*, *lek*, *yom*, *khi*, *chio*, *noi*, *non*, *nong*, *pon*, *bao*, *bang*, *chun*, *khrae*, *on*, *yoi*, etc. (see examples in (1)), which mean ‘small(ness)’ as their primary meaning and in addition carry diverse extended meanings at variable degrees of semanticization. These lexemes also show variable degrees of productivity, and further, of morphosyntactic bonding with other lexemes.

- (1) a. *luk*: *luk ta* [small eye] ‘eyeball’ (> baby, cute, round)  
 b. *lek*: *dek lek* [kid small] ‘a small kid’ (> small, young in age, compact)  
 c. *noi*: *mu noi* [pig small] ‘a small pig’ (> small, young, and cute)

Korean has a few types of forms with the diminutive semantics, in the form of individual words (*cakun*, *elin*), prefixes (*cakun-*, *elin-*, *so-*) and suffixes (*-aki*, *-aci*, *-ali*), all denoting ‘small(ness)’ but also other related meanings (see examples in (2)). Furthermore, the prefixes come from two different sources, Sino-Korean and native Korean, with differential specialization.

- (2) a. *cakun* ‘small’ (*cakun-cip* [small house] > ‘concubine; second uncle’s house’) (> secondary, younger)  
 b. *elin* ‘young’ (*elin-yang* [young sheep] > ‘lamb; Jesus’) (> young, innocent, weak)  
 c. *so-* ‘small’ (*so-may* [small-sale] ‘retail’) (> small, young, weak, inferior)  
 d. *-aki/-aci/-angi* (< ‘baby’) (*songaci* [ox-baby] ‘calf’) (> offspring, imitation, weak, exactness, individuation, part, animal body-part, animal)

A comparative analysis reveals that the smallness concept forms an elaborate conceptual network in five major domains, i.e. YOUNG (thus, younger person, cute, last-born), WEAK (thus, immature, insignificant), FINE (thus, powder, soft, minute, grind, dust, feces), LOW DENSITY (thus, rare, rarefy, thin out, slacken, light, slight, low-priced, subtle, approximate, ethereal, skinny, little bit, etc.), DEPENDENT (thus, derived, fruit, subordinate, complement), and ROUND (thus, fruit, round, smooth); whereas Korean has WEAK (thus, low in degree, insufficient, inferior, contempt; also branching out to animal and animal body-part), DEPENDENT (thus, approximation, imitation, also branching out to exact), NON-FIRST, and INDIVIDUATION.

Semantic extension directionalities in Thai and Korean diminutive lexemes exhibit certain similarities but also a number of differences in the motivating inference patterns, e.g. ‘small therefore cute’ in Thai and ‘small therefore contemptible’ in Korean, in particular, leading to largely more neutral or positive meanings in Thai, and to largely negative and pejorative meanings in Korean including animal and animal body-part naming. Drawing upon corpus data this paper examines the conceptual extension patterns behind the evaluative morphopragmatics of diminutives from crosslinguistic and grammaticalization perspectives.

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## **ESL Student-initiated questions: an interactional ethnography case study**

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Keywords: student questions, classroom discourse, learner agency

Grounded in sociocultural theory (SCT) of mind and a social-constructivist view of learning, the present study analyzed in depth the characteristics, and role of student-initiated questions in the construction of opportunities for learning in an advanced pre-university academic writing class. Questions remain an “undertheorized” (Walker & Gleaves, 2016) aspect of class interactions because of the complex and fast-paced nature of classroom discourse. The few available studies on students’ questions in L2 classrooms are limited in scope and present conflicting findings (e.g., Ohta & Nakaone, 2004). These studies have typically catalogued or categorized students’ questions in a selected sample of class interactions. To date, researchers’ and practitioners’ understanding of the changes in the characteristics, roles and interaction patterns triggered by L2 students’ questions remains very limited. The study responds to this gap in the literature and attempts to build a model of L2 students’ questions over a full term (12 weeks) to better understand how and when L2 learners exert their agency and the factors that may determine (i.e., enhance or constrain) students’ responsiveness to mediational moves in instructional discourse.

The study adopted an interactional ethnographic approach to represent and analyze a data set consisting of 70 hours of classroom discourse. The coding of student-initiated questions aimed to describe the distribution, format, cognitive domain, and interaction patterns triggered by students’ questions, and examine how these features of students’ questions changed over time (from the beginning to the end of the term).

Preliminary findings indicate that, on average, students asked about four questions per hour, and tended to ask mostly yes/no and wh- questions that were almost exclusively addressed to the teacher. The teacher resolved these questions with direct answers mostly in one, and sometimes two turns. There were instances of complex answers that involved multiple turns between the student who initiated the question, the teacher and/or peers. About 50% of students’ questions related to grammatical and lexical inquiries and were referential in nature.

These quantitative findings are complemented with a qualitative analysis of the local and broader contexts of the students’ questions and the relationships between the different aspects of students’ questions (format, cognitive domain) and the creation of opportunities for learning. We will present the findings and discuss implications for L2 instruction, assessment and future research.

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## **Discourse priming and individual differences in first language acquisition. A traceback approach**

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**Keywords:** language acquisition, discourse priming, traceback, individual differences, corpus linguistics

Following a usage-based approach to language acquisition (Tomasello 2003), linguistic knowledge is acquired on the basis of the children's specific experiences with the world and the language(s) that surrounds them. Studies have shown that lexically specific units (*what's this?*, *let's go*) and frame-and-slot patterns (*[what's X]*, *[let's X]*) feature heavily both in child-directed speech and in the early speech of children (e. g. Arnon & Christiansen 2017; Cameron-Faulkner, Lieven & Tomasello 2003). Since input (and output) is different for every speaker, we can also expect differences in how the input influences the output in the form of priming (Rowland et al. 2012; Kirjavainen & Theakston 2011).

For the present study we used four high-density corpora of German-speaking children aged between 2;0 and 2;6 years (see Author1 2019). To investigate to what extent the children's utterances can be related to the direct input we used the traceback approach (see Author1 2019). The underlying rationale of this method is to identify recurring chunks as well as frame-and-slot patterns in a small subsample of a corpus, the so-called test corpus. These patterns are subsequently traced back to earlier utterances which constitute the so-called main corpus (Kol et al. 2014). Taken together, the four test corpora under investigation consist of 874 target utterances. These utterances were traced back, but in contrast to previous traceback studies (Dabrowska & Lieven 2005; Lievent et al. 2009; Vogt & Lieven 2010; Author1 2019; Author1 et al. 2020), they were not traced back to all previous recording sessions except for the last two, and not to the child's own utterances, but rather to a) the input utterances in the last two recording sessions, b) the input utterances in the two previous recording sessions (functioning as a baseline to assess the influence of recency). As a second analysis criterion, we also take mean length of utterance (MLU) into account to see how the level of proficiency influences the amount of priming in each child.

The results indicate that the preceding discourse plays a substantial role in children's construction of utterances in that they often used structures which were immediately occurring in the previous discourse. We further found that children's use of discourse priming links up nicely with their MLUs: lower MLUs showed an increase of priming whereas children with a higher MLU did not rely on discourse that much anymore. For example, Simons's MLU hovered around 1;8 and he relied on priming in 73% of the cases. Merit, on the other hand, is the most proficient child in our sample with an MLU of 4;8, and her traceback success is the lowest (44%) of all children. In contrast to Simon, who increasingly takes up patterns of his caretakers from direct discourse and modifies them only slightly, Merit detaches herself more strongly from them. This is consistent with the usage-based

assumption that children's linguistic development starts with a strongly item-based reproduction of input patterns that gradually gives rise to increasingly creative and productive uses of constructions.

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## Default meaning and root levelling of the history of the Armenian verb

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Keywords: Proto-Indo-European, Classical Armenian, tense-aspect stems, lexical aspect, analogical change

Classical Armenian eliminated virtually all the traces of the Proto-Indo-European (PIE) ablaut and early Proto-Armenian morphological alternations in the root by means of analogical levelling, cf. Arm. nom.-acc.sg. *ot-n* 'foot' (from PIE acc.sg. *\*pod-m*) → gen.sg. *ot-in* (instead of the regular outcome of PIE gen.sg. *\*ped-os*), Arm. aor. *bek-i* 'I broke' (from PIE aor. *\*b<sup>h</sup>eg-*) → pres. *bekan-em* 'I break' (instead of a continuant of PIE pres. *\*b<sup>h</sup>-ne-g-*). It has not received close scrutiny, which forms in the paradigm determined the root shape and whether such forms were the same for different lexemes.

The proposed paper investigates the direction of the root shape levelling with regard to the evidence of the Classical Armenian verbs inherited from PIE.

All forms of the Classical Armenian verb are based on two tense-aspect stems, the perfective and imperfective ones. This system has evolved from the PIE opposition of three stems — the perfective, imperfective, and stative/resultative ones. The working hypothesis behind the presented research states that, depending on the lexical aspectual features of a verb (such as telicity or durativity), its imperfective, perfective, or stative stem must have expressed the most frequent default

meaning, and therefore should be considered as the most likely source for the levelling of the root shape, cf. Haspelmath (2006), Hill (2007), Fertig (2013) among others for general theoretical premises and Bartolotta (2009) and Dahl (2010) for the detalisation of the lexicon-morphology interface in the verbal system of PIE and some ancient Indo-European languages.

In order to test this hypothesis, I will specify which Classical Armenian roots can be unambiguously derived from which PIE tense-aspect stems. The lexical aspectual features of the relevant Classical Armenian verbs will be defined based on the textual evidence. Thus, in the case of PIE pfv. *\*uid-e/o-* ‘found’ (ipfv. *\*ui-ne-d-*) and CArm. pfv. *git-* ‘id.’ (ipfv. *gt-ane-*), it is reasonable to assume a continuity of the unchanged meaning ‘to find’, the lexicalized telicity of which was reflected in the unmarked perfective stem used in the aorist tense. Possible correlations between default meanings, morphological unmarkedness, and the direction of analogical levelling will be addressed.

The outlook of the obtained results is twofold. Firstly, should the tested hypothesis prove to be reliable, it can provide additional arguments for the diachronic analysis of those of the Armenian verbs, the exact PIE morphological source of which is disputed; see Klingenschmitt (1982) for discussion. Secondly, the research contributes new empirical evidence to the discussion on the interaction of formal and lexical factors in the work of analogy.

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## **Building bridges between cartography and the documentation of endangered knowledge**

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Keywords: Toponymy, language documentation, Ecuador, Palta, Chicham

Although the study of toponymy does not currently play a central role in linguistics, many documentary linguists have highlighted the importance of toponymy for the study of lesser-documented languages (Adelaar 2007). Particularly in areas of the world where there is a limited historical record, toponymy can shed a crucial light into the ethnohistory of a region and can be highly informative of linguistic patterns and contact phenomena (Aikhenvald 1996). This presentation will convey the initial findings of a long-term study on the toponymy of Ecuador which aims to combine

cartographic data with insights from the documentation of endangered knowledge amongst speakers of Indigenous languages in the region.

Spanish is the national language of Ecuador and is spoken by the vast majority of its 17 million inhabitants. Kichwa is the largest Indigenous language of the country and is spoken by around 600,000 people (INEC 2010). The other 14 indigenous languages of Ecuador are collectively spoken by less than 100,000 people. But despite the current dominance of Spanish and Kichwa, toponymy in Ecuador tells a different story: roughly 45% of Ecuadorean toponyms originate from an indigenous language other than Kichwa. In fact, the majority of those toponyms stem from languages that ceased to be spoken around the time of the European invasion of South America. Toponyms in Ecuador allow us to track historical distributions of languages in cases where no historical record is available. This, in turn, can uncover cases of language contact that were not previously known about. Although studies of Ecuadorean toponyms exist (e.g. Jijón y Caamaño 1940-1945), there has been no major work in this area for over 60 years.

The first part of this presentation will outline the creation of a new database of Ecuadorean toponyms, based on 487 highly detailed (1:50,000 scale) maps created by the Instituto Geográfico Militar. The database includes city/town/village names, river/stream/lake names and mountain/hill names, along with topographic information. For toponyms which do not have an identifiable modern-day source language, this database can be used to explore the geographic distribution of phonotactic patterns which are highly indicative of historical language distributions.

The second part of the presentation will focus on the importance of interpreting the toponymic evidence in the context of traditional Indigenous knowledge. Many Indigenous communities in Ecuador are interested in documenting their knowledge about toponyms and their surrounding geography, and they are adamant that this be a part of any linguistic documentary endeavour. This task is urgent given that in some communities toponymic knowledge is endangered and not being transmitted to younger generations anymore.

By combining traditional Indigenous knowledge with detailed cartographic data, fascinating insights into can be achieved. I will show that prehistoric language distributions, for example the hypothesised presence of Chicham-speaking people in the central highlands of Ecuador, is supported both by toponymic evidence as well as by traditional knowledge documented amongst speakers of Ecuadorean Indigenous languages today.

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## **Profiling of dialect speakers:**

## An experimental study in south Slavia

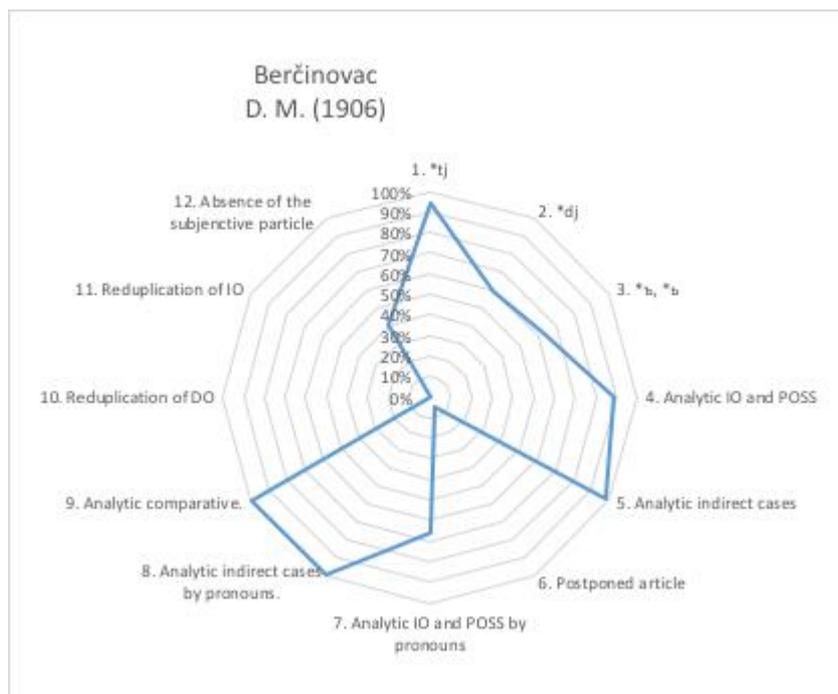
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Keywords: Balkan Slavic, dialect profiling, Serbian Timok dialects, Torlak, quantitative methods

It is known that nowadays, in most parts of Europe, traditional dialects, which were documented and described over the last two centuries, are subject to major transformation under the influence of standard languages. In many cases, such as Western Balkans, those dialects are being replaced by some „standardoids”, or regional koinés, which are still understudied in modern dialectology. The aim of this talk is to present a quantitative method that could help linguists estimate frequency and distributive regularities of distinctive dialect features (understood as a distinction between the standard language and the base dialect) in non-standardized South Slavic varieties, and thus to develop a more adequate and up-to-date tool for placing such varieties on ethnolinguistic map of Europe in 21st century.

At this stage of research, the methodology of dialect profiling is being developed for so-called Torlak dialects, and more precisely, for the varieties of Timok and Lužnica in Eastern Serbia and Tryn and Belogradčik in Western Bulgaria. A significant part of the analyzed data was gathered by A. Sobolev and D. Konior in 1990-ies and in 2018-2019 (Sobolev 1998, Konior et al. 2020). In this presentation, the method is exemplified on Draginja Mikić's (b. 1906) idiolect, and subsequently compared to several other cases from the Torlak dialect corpus. The samples of Mikić's speech (approximately 5.300 tokens) were recorded in the village of Berčinovac (Timok, Eastern Serbia). Then, a) basing on existing dialectological literature, twelve distinctive features in phonetics, morphosyntax and lexis were chosen, b) their realizations were found in the transcribed narratives, and c) contrastive analysis of the pairs was conducted: the uses of the prototypical forms (i.e. corresponding to the conventional — “ideal” — dialectal reference point) were counted for every of twelve selected differential dialectal features against the background of the standard Serbian language, e.g. *mačeja* ~ *mačeha*, *vižuvali* ‘(they)saw’ ~ *rožena* ‘(she was) born’, *dən* ~ *dan* ‘day’, dative pronouns in sg. *mene*, *ńemu* VS analytical forms in pl. *na nas*. After that, d) a visual representation of the informants's profile was created using MS Office tools (see below) (Konior et al. 2019).



It should be mentioned that stages b) and c) were carried out firstly manually, and later — semi-automatically, with the use of the ReLDI-based tagger and Python scripts (Vuković 2021; Makarova et al. 2020). As a result, the speaker’s profile made clear the idiolect’s degree of proximity to the “ideal” Timok dialect, how dialectal it was in general, and how much different it was from other Serbian dialects and from the standard language.

It is only by applying various modern quantitatively relevant research methods (including those offered by linguistic geography and corpus linguistics) to sufficiently large amount of material that the desired accurateness in dialectal profiling can be achieved. As a result, we will be able to discover interdependencies between different dialectal features and create detailed and consistent linguistic profiles of dialect speakers basing on their speech samples. In a more remote perspective, the achievement of this goal would mean obtaining a quantitative tool for assessing intrasystem coherence and degree of dialect preservation for any Slavic dialectal variety.

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How does clusivity disappear? A historical microtypology of South-Central Trans-Himalayan

Linda Konnerth

<not updated>

## Corpus Study of Grammatical Categories – an Online Tool

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Keywords: corpus tools, grammatical category, paradigm defectiveness, Czech

A corpus examination of grammatical categories in languages with rich morphology can, among other directions, focus on the investigation of the word forms distribution both across the class of words (e.g. POS) and for specific words. In the former case, a norm or a standard behavior of the given word class can be described, i.e. which word forms are more common than others and which word forms are marginal. In the latter case, the specific behaviour of individual words can be studied and grammatical profiles of words can be determined (Janda & Ljashevskaya 2011: 719). Such findings can be useful for instance in the context of lexicographic description or second language teaching. We can also observe strong anomalies within a word paradigm or within a group of words, such as completely missing word forms.

Conducting such research using a standard corpus manager (e.g. BNCweb for BNC or KonText for the Czech National Corpus) is lengthy and laborious. Most corpus users' access to corpus data is limited by the available interfaces and tools. This is why, as a part of the Czech National Corpus project, we have created an online tool GramatiKat ([www.korpus.cz/gramatikat](http://www.korpus.cz/gramatikat)) that offers pre-processed data for further research into grammatical categories and into the inflectional word form distribution in a given word class.

In the first version of the application published in 2021, we focus only on Czech nouns and the nominal categories of number, case and gender. In the future, Czech adjectives and verbs will be added together with corresponding categories.

The presented application provides data on the distribution of word forms in singular and plural and in 14 cases (7 cases in two numbers) either within the whole class of Czech nouns or in four individual genders. The user can compare individual nouns with the standard. Research has revealed that less than one per cent of the noun lemmas correspond to the standard behaviour of Czech nouns, with the vast majority of words demonstrating minor or major anomalies in the distribution of

inflected forms. Further analysis of words with defective paradigms (word form completely missing) revealed that a common cause of the defectiveness is limited collocability, semantic features or a change in syntactic function of the word.

The data used in this application are from the SYN2015 corpus (a representative corpus of written Czech, 100 million words). For now, the tool is only available for Czech, but it can also be made operational for other, especially related languages, such as other Slavic languages. Data for nearly 15 thousand Czech nouns are currently available in the application. The results were compared with the data in the SYN2020 corpus, which is comparable in size and composition with SYN2015. The resulting grammatical profiles of individual nouns as well as the distribution of word forms throughout the whole class are very similar in the two corpora which confirms that both is independent of the particular texts composition of the corpus.

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## **Typology of standard negation: Insights and lessons from South American languages**

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Keywords: Standard negation; typological patterns; areal patterns; South American languages

It has emerged from previous typological works on standard negation, i.e. the negation of an overt verbal predicate in main clause declarative sentences (Payne 1985; Miestamo 2005), that South American (SA) indigenous languages are special. In particular, they stand out for their tendency to use a negative marker *after* the verbal predicate (Dryer 2013a; Muysken et al. 2014; Vossen 2016). The present study undertakes a focused exploration of standard negation in SA, with the advantage that (i) it is based on genealogically and areally balanced sample of 223 SA languages, representing 70 lineages, and (ii) it represents close to a maximum of lineages for which relevant information is available to date. The aim of the study is three-fold: (a) to verify earlier observations based on improved data, (b) compare such parameters as the number of negators and their morpho-syntactic status in SA languages vs. the rest of the world, as this was yet unknown, and (c) identify whether the observed negation patterns have a particular distribution, genealogical or areal. The paper makes the following points:

About 83% of the SA languages always use a single negator and thus follow the cross-linguistic preference to use a single negator. However, when it comes to the position of the negator, and its formal realization, the SA languages show a different picture. First, the most frequent negation pattern in South America is indeed the postverbal one, i.e. with the negator placed after the verb, found in 52% of our sample. The second most frequent pattern - preverbal - occurs only in 26% of the

languages. Compared to the world (Dryer 2013), this is exactly the opposite distribution. Second, as for the morpho-syntactic status, we find negative suffixes as the most frequent strategy in South America; preverbal negative particles is almost twice less common. This is, again, the opposite of the cross-linguistic picture. More generally, we find a correlation: in the postverbal position negation tends to be morphologically bound, whereas in the preverbal position, it tends to be encoded by free-standing particles, as opposed to prefixes. Dahl's (1979: 94), Dryer's (2013a,b) and Vossen's (2016) cross-linguistic data suggest the same tendencies but with a different frequency distribution. Finally, we demonstrate that while the postverbal pattern (dispreferred cross-linguistically) is genealogically anchored and stable in the SA languages, the preverbal pattern shows a clear areal patterning. This distribution calls for an exploration of the role of language contact in the areas we identify.

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## Acquisition of referentiality in elicited narratives of Estonian-speaking children

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Keywords: reference introduction, reference chain, child speech, narratives, first language acquisition

Narratives place greater demands on semantic clarity, planning and linguistic self-monitoring as they lack the supportive framework of conversational interactions (i. e. implicit shared background knowledge and nonverbal cues) (Nicolopoulou et al. 2006), this skill is beneficial for understanding and producing the conventions that are both typical of classroom interactions and instruction (Gillam et al. 1999), and supportive of language development. Children have to understand which referents are familiar to all speakers and which are new, which linguistic forms are available for the reference in

their language (due the typological nature of a language) and that certain linguistic forms are used to refer to objects or persons, which are new to the listener, whereas other forms are used for those referents that have already been mentioned. The skills of introducing and maintaining a reference during the story, that is, the skill to use longer reference chains, and skills of use of different referential means demonstrate the child's ability to create a coherent and elaborated narrative.

This qualitative study addresses the acquisition of referential expressions in preschoolers' narratives in Estonian. A total of 16 6-7-year-old typically developing monolingual Estonian children were tested using the story "Baby Goat" from the Multilingual Assessment Instrument for Narratives (Gagarina et al. 2019). Children's answers were recorded, transcribed and analysed to answer the following research questions: 1) which correlations can be observed in the length of the story, general complexity (the scores) and average length of the reference chain of children's narratives; 2) which strategies are used by Estonian-speaking children for introducing a new referent; 3) which strategies children use for maintaining referents; 4) how are related the strategies used in introduction and maintenance of referents with the typological characteristics of the language? 5) what kind of other influencing factors can be detected in children's use of referential devices?

The results revealed that the length and complexness of the story were correlated with the average number of reference units in a chain. Estonian children introduced new referents mostly with bare nouns; they also used mostly bare nouns for further reference. The typical reference mean for further reference in Estonian, NPs consisting of a noun and a determiner, was used more frequently for main characters of the story while bare nouns were preferred for other characters. This indicates the impact of pragmatic factors (e.g. the role of the character in the story) to the choice of linguistic means. The use of only verbs for reference maintenance is possible in languages allowing subject ellipsis and having verbal morphology indicating the person and number of the subject. The use of zero-reference, that is only verbs for reference to familiar referents was as frequent as reference with pronouns in our study and have not been reported in other studies (e. g. Aksu-Koç, Nicolopoulou 2014). Thus, the pattern of strategies is different in some ways from that of other languages sharing typologically similar features (inflectionally rich pro-drop languages).

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Isochrony and “anti-isochrony” in the Soikkola Ingrian trisyllabic foot

Natalia Kuznetsova, Irina Brodskaya & Elena Markus

<not updated>

Unfreezing legal genres: maritime shipping agreements and diachronic variation

Mary C. Lavissière & Laurent Fedi

<pdf>

Change of Common Slavic O to I in Southwest Ukrainian: The Case of the Kryvorivnja Dialect

Oksana Lebedivna

<not updated>

**On syntactic and semantic adaptation of Russian discourse particles *ved'* and *že* in Eastern Finno-Ugric languages**

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Keywords: discourse particles, uncontroversial information, matter replication, Finno-Ugric, Russian

Discourse particles in Finno-Ugric languages spoken on the territory of the Russian Federation are elements of rather late development; many of those are borrowed from Russian (Majtinskaja 2010). This research looks at the model of use of the two particles *ved'* and *že* replicated from Russian in three languages: Udmurt and Komi (Permic branch), and Erzya (Mordvinic branch).

McCoy-Rusanova (2017) describes the particle *že* as activating the background knowledge while the particle *ved'* additionally “implies indisputability of this knowledge” (McCoy-Rusanova 2017:107). *Že* is only used as enclitic; *ved'* can encliticize or be the sentence-initial element. In many contexts, the particles are interchangeable (Bonnot & Kodzasov 1998):

(1) Russian (p. k.)

<i>On</i>	<i>objazatel'no</i>	<i>pridët.</i>	<i>My</i>	<i>že/ved'</i>	<i>dogovorilis'.</i>
he	definitely	come.FUT.3SG	we	PTCL/PTCL	agree.PST.PL.REFL

‘He’ll definitely come. We agreed on that.’

The particle *že* is more multifunctional while the particle *ved'* has a number of contextual restrictions (e.g., inability to occur in wh-questions and orders):

(2) Russian (p. k.)

<i>Počemuže/*ved'</i>	<i>on</i>	<i>ne</i>	<i>prišël?</i>
why	PTCL/PTCL	he	NEG come.PST.M

‘Why didn’t he come?’

Udmurt, Komi, and Erzya corpus data show that the particle *ved’* (and its phonetic variant *ed’* in Erzya and *öd’* in Komi) is quite frequent in all three languages. *Že* is encountered either as a direct replication or with minor phonetic adaptations in Komi and Erzya: Ko. *žö*, E *žo* (Beznosikova *et al.* 2012, and Erina 1997). In Udmurt, *že* is marginal.

All the three recipient languages have other particles with similar functions (*uk* in Udmurt, *taj* in Komi, *eno* in Erzya in assertive contexts and a range of particles in other speech acts). In informal registers, they may cooccur with the borrowed Russian particles within an utterance:

(3) Beserman Udmurt (Multimedia corpus of Beserman Udmurt)

[In September, we start digging out potatoes.]

*Kartoškamê ved’ tros, d’erevn’ajân kal’ tros kartoška*

potato.1PL PTCL many village.LOC now many potato

*puktiš’kom=uk.*

plant.DETR.1PL=PTCL

‘We have a lot of potatoes; in the village, we plant a lot of potato.’

The particles in the recipient languages belong to the type described in Panov (2020) as markers of uncontroversiality of a proposition that is suggested to be a cross-linguistic category. However, the replicated and autochthonous particles in the three languages are not entirely interchangeable. Based on the analysis of standard and non-standard written corpora (Udmurt, Komi, Erzya), a spoken corpus (Beserman Udmurt), and fieldwork materials, we aim at mapping the range of functions that the particles *ved’* and *že* acquire in recipient languages and their correspondence to the functions of autochthonous particles. We propose the analysis of the (non-)compliance of the particles in recipient languages with the contextual restrictions that hold for the donor language as well as the analysis of the language-internal restrictions. We examine the ability of the particles to occur in different speech acts, embedded clauses,thetic sentences, irrealis contexts, and possibility of combining with other discourse markers in order to investigate the variability within the domain of uncontroversiality and the behavior of discourse particles in the language contact situation.

### Acknowledgments

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## **Cross-linguistic trade-offs and causal relationships between cues to grammatical Subject and Object**

Natalia Levshina

### **Theoretical background**

In recent years, the notion of efficient trade-offs between different motivations and types of cues has become very popular in functional and typological approaches to language. Examples include trade-offs between information expressed by word order and word-internal structure (Koplenig et al. 2017), case marking and rigid word order (Sinnemäki 2014), and subject indexing and the use of pronominal subjects (Berdicevskis et al. 2020). In studies of linguistic complexity, one often speaks of trade-offs between different complexity types, e.g., phonological and morphological complexity (Fenk-Oczlon and Fenk 2008). The present paper is a case study of linguistic variables that are used to express the core grammatical relationships of Subject and Object, which convey “who did what to whom”. These cues are case marking, rigid word order of Subject and Object, verb-medial order, and ‘tight’ semantics of the arguments, which is measured as association between the roles and lexemes (cf. Sapir 1921; Hawkins 1986; Sinnemäki 2010, 2014; Gibson et al. 2013). In addition to the analysis of correlations between the cues, I also present a causal network (cf. Blasi & Roberts 2017), which reveals directional relationships between the variables.

### **Data and methods**

I use corpora of online news from the Leipzig Corpora Collection (Goldhahn et al. 2012) in thirty languages, which represent sixteen genera from nine language families. Each corpus contains 1 million sentences and has been annotated with the Universal Dependencies (Zeman et al. 2020). The numeric values for each variable represent mutual information (case marking and semantic tightness), 1 minus entropy (word order) and proportion scores (verb-medial order). The correlational and causal analyses between the variables are performed using permutation and resampling, which allows us to address the lack of genealogical independence in the data. Both standard and partial correlations are computed. The Fast Causal Inference algorithm is used for the causal analysis (Kalish et al. 2012; see also Dellert 2019).

### **The results**

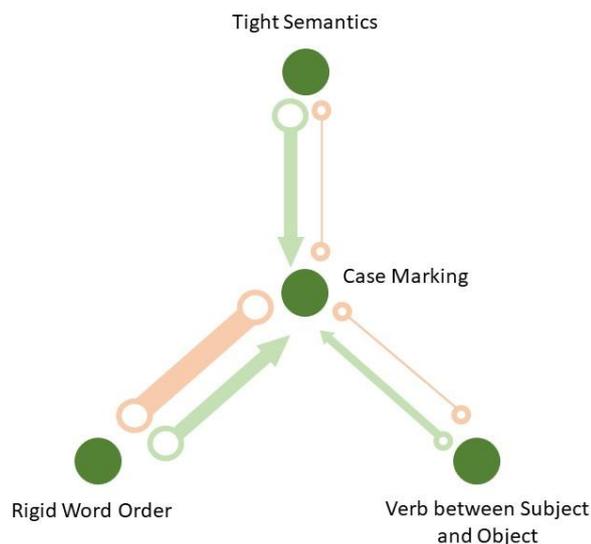
Correlational and causal analyses show that not all cues are negatively correlated (see Figure 1), and the relationships between different cues are not bidirectional (see Figure 2). In particular, there is a positive correlation between the role – lexeme association strength (semantic tightness), and case marking. There is a strong negative correlation between rigid word order and case marking, but the probability of the causal effect of word order rigidity on case marking is much higher than the probability of the reverse effect. A possible historical scenario is suggested, based on existing diachronic evidence and experimental research (e.g. Bauer 2009; Fedzechkina et al. 2016). This study

suggests that the opportunities given to language users for using their language efficiently are very limited, and shaped by factors very different from communicative efficiency. Most likely, the linguistic properties are influenced by sociolinguistic factors, such as the proportion of L2 speakers and population size (McWhorter 2011; Lupyán and Dale 2010; Bentz and Winter 2013; Fenk-Oczlon and Pilz 2021).

Figure 1. Spearman’s correlations between the cues. Black: standard correlations; grey: partial correlations.

	Case Marking	Tight Semantics	Rigid Word Order	Verb between Subj and Obj
Case Marking		<b>0.49</b> 0.44	<b>-0.67</b> -0.66	<b>-0.47</b> -0.22
Tight Semantics	<b>0.49</b> 0.44		<b>-0.16</b> 0.26	<b>-0.44</b> -0.27
Rigid Word Order	<b>-0.67</b> -0.66	<b>-0.16</b> 0.26		<b>0.28</b> 0.01
Verb between Subj and Obj	<b>-0.47</b> -0.22	<b>-0.44</b> -0.27	<b>0.28</b> 0.01	

Figure 2. A causal network, based on the FCI algorithm.



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## Two types of Presentational Amalgam Constructions in Mandarin Chinese

Chang Liu  
<not updated>

## **Prosody, gesture and information structure in interaction: the case of contrastive focus in French**

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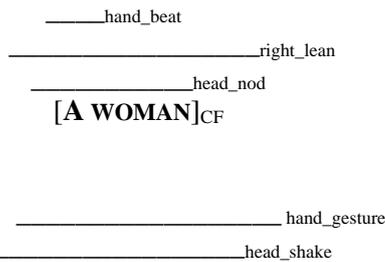
Keywords: information structure, contrastive focus, prosody, multimodal analysis, French

Contrast and focus are two independent notions that sometimes overlap with each other (e.g., Vallduví & Vilkuna, 1998, and Stavropoulou & Baltazani, 2021), as in the case of contrastive focus. According to some studies (e.g., Lambrecht, 1994, and Dooley & Levinsohn, 2001), focus provides new information in an unpredictable way and contrast refers to two (or more) opposed alternatives put into a dependency relation. Prosodic strategies can be used to mark contrastive foci and can be defined not only on the basis of acoustic cues but also on the basis of co-speech gestures (e.g., Dohen & Loevenbruck, 2009, and Ferré, 2014). The purpose of this communication is to describe the strategies used in French.

The data for this research have been collected from four French native speakers from Belgium through conversations and communicative games/tasks (Meurant et al., ongoing). Data processing implies a segmentation into several units (from Inter-Pausal units to phones) along with annotations and measurements of speech (i.e. lengthening, F0 per syllable, pitch range, syllabic duration, prosodic prominence, and articulation rate) and gesture (i.e. form, duration, and temporal coordination with speech). Some results are expected following the conclusions of a pretest study which involves a theoretical and methodological framework similar to the one presented in this communication. During the pretest, a selection of 54 Inter-Pausal units produced by one female speaker were analyzed and 36 contained a contrastive focus.

The results of the pretest highlight an overall prosodic pattern used for the contrastive focus marking and characterized by a more reduced pitch range, a slower articulation rate and a lower average of syllabic duration than the pattern found for other types of information structures. More pitch compressions are also observable, as well as less lengthening. Furthermore, 88.8% of the contrastive foci are produced with at least one gesture and the use of articulators (i.e. head, hands, brows or body) differs according to two points. Firstly, the values of the prosodic cues are related to different kinds of gestures. For example, hand gestures are linked with the shortest syllables (mean: 159 ms) of the pretest corpus (mean: 197 ms). Secondly, gestures vary depending on the function of the contrastive focus. For instance, when the speaker selects one alternative from a list, she mostly uses a head movement, a hand gesture and a body lean (1) while corrections are mostly marked with head and hand movements (2).

(1) Is your character [A WOMAN]<sub>CF</sub> or [A MAN]<sub>CF</sub>?



(2) No, it is [NOT THAT]<sub>CF</sub>

Interactions also appear between the gesture type, the contrastive focus function and the prosodic cues. For example, the F0 values are higher (mean: 256 Hz) for the first element of a parallel contrast accompanied by head movements and lower (mean: 203 Hz) for the second element of a parallel contrast marked with head gestures.

Such a study is part of a PhD which compares the manual and non-manual prosodic marking of contrastive focus in Belgian French and French Belgian Sign Language.

### Acknowledgments

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Constructing conditionals in Australian languages: a typological study

Ellison Luk  
<not updated>

## Beyond affectedness: Partitive objects and degrees of agenthood in Ancient Greek

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Keywords: experiential verbs, case variation, accusative, genitive, degrees of agenthood

As in several other ancient and modern Indo-European languages, in Ancient Greek the genitive may be used in place of the accusative to encode the direct object. The two types of object encoding can alternate with some verbs, alternation being viewed as connected with degrees of patient affectedness. This is typically exemplified with verbs of consumption, as in (1) and (2).

- (1) *mē*                      *pōs*                      *tis*                      *lōtoío*                      *phagōn*  
 NEG                      how                      INDF.NOM                      lotus.GEN                      eat.PTCP.AOR.NOM  
*nóstoio*                      *láthētai*  
 return.GEN                      forget.SBJV.AOR.MID.3SG  
 ‘So that nobody, having eaten some lotus, may forget the return.’ (Hom. *Od.* 9. 102)
- (2) *ē*                      *tón*                      *g’*                      *en*                      *póntōi*                      *phágon*  
 or                      DEM.ACC                      PTC                      in                      sea.DAT                      eat.AOR.3PL  
*ikhthúes*  
 fish.NOM.PL  
 ‘Or in the sea, the fish have eaten him up.’ (Hom. *Od.* 14.135)

While in (1) the partitive genitive indicates an indefinite quantity, in (2) the accusative refers to a fully accomplished action that refers to the whole direct object-patient. Note that the verb *phágon* ‘eat’ indicates a change of state of the patient, hence the unbounded vs. bounded reading of the genitive vs. accusative objects in 0 and 0 (Napoli 2010). Similarly, with contact verbs the two cases can alternate and indicate whether contact is actually achieved or not, as with the verb *orégomai* ‘reach, hit’ with the accusative but ‘aim at’ with the genitive (Luraghi 2020: 49-51).

Alternation of the accusative with the partitive genitive, however, is not limited to change-of-state or contact verbs. In this paper, I focus on experiential verbs, typically characterized by a low degree of transitivity and not implying any change of state of the object-stimulus. Rather than concentrating to the implications of case alternation on the construal of the object, I consider the effects of variation on the whole construction, and argue that genitive vs. accusative marking of the object affects the construal of the subject-experiencer. Cross-linguistically, the different construal of the experiencer in terms of degrees of control often results in non-nominative encoding of the experiencer (Malchukov 2005, 2006; Aldai and Wichman 2018). Contrary to this frequent pattern, in Ancient Greek it is object encoding that affects the construal of the experiencer and reflects a scale based on possible control, understood in the case of experiential verbs as corresponding to degrees of attention. Object marking with experiential verbs shows that the accusative is typical of verbs of sight, thought, intellectual knowledge, and emotions connected to sight and awareness, such as wonder and fear. The genitive is connected with touch, smell, taste, memory, forgetfulness, care and desire. In the in-between area, verbs of hearing, learning and verbs of affection may feature both accusative and genitive encoding, thus constituting a fuzzy transition area. The connection between sight and other experiential verbs that feature accusative encoding reflects an embodied conceptualization of experiential situations.

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### The gradience of Old Albanian vowel length contrasts

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Keywords: gradient phonological contrast, functional load, predictability of distribution, vowel length, Old Albanian

In this paper we take a new approach to determine to what degree Old Albanian vowel length can be characterized as being contrastive. Vowels in Old Albanian texts are consistently marked as either long or short [V ~ VV] and generally appear on the same lexical items across texts and authors. Phonetic environment as well as compensatory and final lengthening processes have played a crucial role in the attested distribution (Schumacher & Matzinger 2014, Matzinger 2006, Çabej 1976). Long vowels are generally found before post-tonic /t/, /n/ and /m/. In addition, some minimal and near-minimal pairs emerged as a result of final lengthening in monosyllabic nouns, e.g., *pe* ‘see.aor.2sg’ ~ *pē* ‘thread’; *ðe* ‘give.aor.2sg’ ~ *ðē* ‘earth’ or due to compensatory lengthening following post-tonic word-internal elisions, e.g., ‘*mjēk*’ < Lat. *Medicus* ~ *pjek* < EPA *pekō* < PIE \**pek<sup>w</sup>-oH* (Schumacher & Matzinger, 2014:217). Lastly, in a number of texts, including *The Missal* (1555) long vowels seem also to interact in synchronic compensatory lengthening following word-final schwa deletion (Çabej, 1987):

(1)

...as mos merr **ënderë** kujnaj... [fol.21v]

..nor not take honour.acc nobody.dat

*nor should you take anyone's honour*

...e ti ep të ënfalë e **ëndër** e lavd Jezü Krishtit... [fol.24v]

...and you give thanks and honour.acc and praise Jesus-Christ.dat

*And you give thanks and honour and praise to Jesus Christ...*

The relatively low number of minimal pairs has led some scholars to conclude that in some cases long vowels in Old Albanian are lexically specified while in general length differences were categorized as allophonic variation (Schumacher & Matzinger 2014, Matzinger 2006). Yet the mere presence of minimal pairs has led others to maintain that vowel length in Old Albanian was contrastive (Çabej, 1976). Recent research in phonology has shown that a clearer picture of the distribution of phonemes can be obtained through quantifying the degree to which the distribution of specific phonemes is predictable (Hall, 2009). This has implications for adequately describing the underlying representations of a phonological system.

We report on a corpus study that explores the gradience of vowel length contrasts in Old Albanian by analyzing the functional load and the predictability of distribution (Hall 2009, Stevenson & Zamuner, 2017) of long and short vowels in four Old Albanian texts. Functional load was calculated as the difference in entropy of individual phonemes across a corpus before and after the merger of the possible contrasts while predictability of distribution was measured as the entropy of individual pairs of long and short vowels across all phonological environments (Hall 2009, Surendran 2003). Measurements were made on the entire corpus as well as for individual authors to extract possible differences in dialectal variation. All calculations and corpus analysis were made via the software *Phonological Corpus Tools* (Hall, 2017). Preliminary results suggest that the functional load of vowel length is different for different vowels, with /e/, /a/ and /i/ having the highest values.

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## Support verb complex predicates in varieties of Portuguese

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Keywords: Complex predicates, Resultative constructions, Passive constructions, Constructional variation, Construction Grammar, Sociolinguistics.

The aim is to describe results of a Brazilian research about the resultative predications formed by complex predicate construction that consists of support verb. The focus relies on the description of the constructional variation phenomenon that they can reveal: the similarity relation between different complex predicates constructions and the similarity relation between resultative predication and passive predication constructions.

Empirical studies centered on data taken from Brazilian and Portuguese written varieties (for instance, academic and journalistic genres) and developed in the Predicar Project (<https://projeto-predicar.wixsite.com/predicar>) are considered in order to deal with: the possible verbal lexemes that are more or less attracted to the (semi)support verb slot of such complex predicates; the formal and functional properties of the complex predicates formed by them; their functional correspondence to

simple verbs and predicates in passive voice construction that consists of auxiliary verb (*ser, to be*); the constructionist representations of passive and resultative constructions in the Portuguese grammar, considering variation links. These studies were developed according to Usage-Based Construction Grammar, Cognitive-Functional Linguistics and Sociolinguistics and considering a multivariate analysis.

The hypotheses that raise the central problems of this proposal are the following ones: (i) although the verbs, that collocates at the support verb slot in the complex predicates which configure resultative predications, are related by similarity, they are associated to different constructional configuration concerning their productivity and grammaticality in Portuguese varieties and genres, as well as concerning the semantic profile of the non-verbal element with which they occur in the complex predicate formation; (ii) the support verb predications (*levar um tiro/be shot, ter fiscalização/have inspection, sofrer ataque/suffer attack*) are related to the voice auxiliary verb predications (*ser alvejado/be targeted, ser fiscalizado/be inspected, ser atacado/be attacked*) in the conceptualization of a causative-resultative state-of-affairs from a resultative or a passive perspectivation; (iii) the representation of the associative links between verbal lexemes attracted to the support verb slot and between support verb resultative constructions and voice auxiliary passive constructions is based on the idea of alternation-based generalizations – similar configuration of formal and functional attributes (allostructions, according to Cappelle, 2006; Perek, 2012), symbolic similarity between independent constructional patterns (Machado Vieira and Wiedemer, 2019), associative links related to discursive paradigm (inspired by “discursive pattern”, Leino and Östman, 2005). “A discourse pattern is the cognitive correlate of the linguistically defined text type, and the socioculturally defined genre. Understanding of text and discourse takes place primarily in terms of discourse patterns” (p. 200).

Then, it brings together some empirical evidence to questions related to: the cognitive system of passive and resultative predications codified by a verbal or verbal-nominal periphrases, formal and functional properties shared by both types of predication constructions compared here and also the status of the verbs in the formation of complex predicates.

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Causality and epistemic stance: A multimodal analysis of Hebrew *ki* ‘because’-clauses in talk-in-interaction

Yael Maschler & Anna Inbar

<pdf>

## Irregular first person inflections in Cariban: converging factors for morphological (dis-)similarity

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Keywords: Cariban, Morphology, Irregular inflection, Morphological change, Network model

Proto-Cariban is reconstructed as having an untypical split-S system, where the division between  $S_A$  and  $S_P$  is not based on any known semantic criteria (Meira 2000b). Rather, verbs derived via the detransitivizer *\*ət(e)-/e-* (Meira et al. 2010) end up in the  $S_A$  category, while almost all other intransitive verbs are  $S_P$  (Meira 2000b). The category of verbs is primarily identified via the person marking prefixes they take (Table 1).

Table 1: Proto-Cariban split-S person marking

	$S_A$	$S_P$
1	<i>*w-</i>	<i>*uj-</i>
2	<i>*m-</i>	<i>*əj-</i>
1+2	<i>*kit-</i>	<i>*k-</i>
3	<i>*n-</i>	<i>*ni-</i>

Many Cariban languages have modified this system, introducing new person markers (Gildea 1998: 80–84, 90–92). These innovations most likely happened via lexical diffusion, as suggested by Meira (2000a) for the switch of  $1>3$  *\*t-* and  $1S_A$  *\*w-* in Tiriyo and Akuriyo, and as evidenced by the *kit̃- ~ k-* ‘ $1+2S_P$ ’ variation attested in Werikyana (Spike Gildea, p.c.). Of interest are new prefixes which did not spread completely, leaving over a small group of verbs with synchronically irregular inflection patterns, the old  $S_A$  markers. This is illustrated in (1–4), where (a–b) show verbs with regular marking, and (c) shows verbs with irregular marking – reflexes of Proto-Cariban *\*w-* ‘ $1S_A$ ’.

(1) Hixkaryána (Derbyshire 1985: 188, 209) a. *k-ratano* ‘I wept’

b. *k̃i-k̃itano* ‘I rushed’

c. *i-tono* ‘I went’

(2) Arara (Alves 2017: 153)

a. *k-omomili* ‘I entered’

b. *k-onkuli* ‘I ascended’

c. *w-ebini* ‘I came’

(3) Tiriyo (Meira 1999: 293–294)

a. *t-əturu* ‘I talked’

b. *t-əəniki* ‘I slept’

c. *w-əepi* ‘I came’

(4) Yukpa (Meira 2003)

a. *j-otiri* ‘I stayed’

b. *ji-nke* ‘I slept’

c. *Ø-to* ‘I went’

(5) Carijona (Koch-Grünberg 1908: 79; Guerrero-Beltrán 2016b: 70, 2016a: 5)

a. *j-ehihəhjai* ‘I fight’

b. *j-ejae* ‘I come’

c. *wi-tæe* ‘I go’

Interestingly, of 18 investigated person marker extensions affecting intransitive verbs, the 6 extensions leaving such irregular verbs all introduced 1S<sub>(A)</sub> markers. Three of these innovative markers are reconstructible to intermediate proto-languages: Proto-Parukotoan \**k-*, Proto-Waiwaian \**k-*, and Proto Tiriyoan \**t-*. The other three are found in single extant languages: Akuriyó *k-*, Carijona *j-*, and Yukpa *j(i)-*. Besides some language-specific irregular verbs, the six innovations show considerable overlap in what verbs they did not affect (6).

(6) Proto-Cariban verbs with multiple irregularly inflected reflexes

a. \**a(p)/eti* ‘to be’

b. \**ka(ti)* ‘to say’

c. \**itə(mi)* ‘to go’

d. \**(ət-)jəpi* ‘to come’

e. \**ipitə* ‘to go down’

Using Bybee’s (1985) network model of morphology, I show that some cases of incomplete extension can be argued to be due to lexical connections based on morphology (presence vs absence of the detransitivizing prefix), while the distribution of others reveals phonological connections between verbs with innovative markers (*e-* and/or *ə-*initial vs others). While no semantic connections have emerged as relevant, many of the resistant verbs are high frequency verbs, a factor predicting conservatism in Bybee’s model. In fact, most cases of resistant verbs are predicted simultaneously by three factors: morphological connections, phonological connections, and frequency. Thus, while the network model offers attractive explanations for the (non-)spread of innovative 1S<sub>A</sub> markers, these predicting factors strongly overlap in many of the investigated cases of extension. This in turn is largely due to the fact that the most high-frequency S<sub>A</sub> verbs were different from normal S<sub>A</sub> verbs already at the level of Proto-Cariban, since they did not contain the detransitivizing prefix \**ət(e)-/e-*, and were therefore morphologically and phonologically distinct from normal S<sub>A</sub> verbs.

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## A typology of denominal verb formation

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Keywords: typology, denominal verb formation, verbalizers.

**Introduction.** Since Clark & Clark (1979) and Aronoff (1980), studies on zero-derived denominal verbs in English and elsewhere (such as *to nurse* in *he nurses well*) have stressed the unpredictability of their semantic effects, connecting it to the specific word-formation rule that derives them from nominal bases. Zero-derivation, however, is not the only strategy to obtain a verb from a noun across languages, as many languages make use of overt verbalizers to do so. One such example is Seri, where the prefix *i-* combines with nominal roots yielding meanings such as ‘put on X/get X/use X/acquire X’ (*i-tóm* VBLZ-money, ‘have money’; Marlett 2008:473). Except for a sketchy treatment by Aikhenvald (2011:232-237), denominal formatives have never been seriously investigated in a typological perspective. Aikhenvald’s classification is essentially concerned with semantics (identifying 11 semantic types of verbalizers) and disregards syntactic and morphological aspects of denominal verb formation.

**Objectives, sample, parameters of analysis.** The aim of this paper is to provide a typology of overt denominal verb formation across languages, analyzing overt/non-zero strategies through which verbs are derived from nouns. The research is based on a 150-language convenience sample, selected after a preliminary scrutiny of grammars in which such phenomenon is described in detail. The parameters of analysis are:

- a) *Morphology*: (i) morphological status of the formative (bound morpheme/clitic/independent word/etc.); (ii) productivity (productive/fossilized); (iii) features of the base (simple root/inflected noun/modified noun/NP/etc.); (iv) morphological integration of the resulting verb (whether it displays the whole set of inflectional/derivational forms of non-denominal verbs or only a subpart thereof).
- b) *Syntax*: (vi) transitivity of the resulting verb; (vii) presence *vs.* absence of a classificatory argument.
- c) *Semantics*: (viii) semantic effects (meaning of the resulting verb: existential (‘be N’), inchoative (‘become N’), proprietive (‘have N’); cf. Aikhenvald 2011:232ff.); (ix) specificity of the nominal base (generic *vs.* specific; type *vs.* token); (x) polysemy of the formative (whether it has functions other than deriving verbs from nouns or not).

The synchronic typology is complemented by a diachronic-typological analysis of a subset of languages in which the diachronic source of the formative is known or can be safely reconstructed, in order to establish whether the specific source of the formative (e.g. light verbs) is responsible for its synchronic distribution and properties.

**Results.** From the morphological point of view, productive denominal formatives seem to be more frequent than fossilized ones, and productivity seems to positively correlate with etymological opaqueness (the more opaque, the more productive). From a syntactic point of view, intransitive denominal verbs are overwhelmingly more frequent than transitive ones, and the following universal can be formulated: “if a given denominal formative is used to form transitive verbs, it is also used to form intransitive verbs”. Even this primacy of intransitivity can be explained in diachronic terms (e.g. as the result of an operation of noun incorporation, which leaves no room for an overt object). Finally, there are semantic types that cluster together more frequently than others (e.g. existential+inchoative; proprietive+manipulative (‘use N’)+causative (‘provide with N’)), pointing to possible diachronic paths from specific lexical sources. As for polysemy, functions that are typically encoded by denominal formatives include middle voice, reciprocal (Huang & Hayung 2008), antipassive (Sansò 2017:189-193), causative, and irrealis (Huang & Hayung 2008).

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## Genericity and habituality in Lakurumau

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Keywords: Tense/Aspect/Mood; Oceanic; semantics; morphosyntax

In this paper, I describe how the semantic category of habituality is expressed in Lakurumau, a Western Oceanic language spoken in New Ireland (Papua New Guinea). All data come from a 19-hours corpus of Lakurumau natural speech.

Partially following Krifka et al. (1995), I distinguish three kinds of habitual expressions: (a) generic expressions (GE; 1a.); (b) habitual expressions (HE; 2.); (c) situational habituals (or ‘generic passages’; Carlson & Spejewski 1997), describing sequences of habitual events (SH; 3.).

- (1) A    *boi*    *a=*    *vuna*    *yaan*    *a*    *mayaang*  
 ART   pig    3SG.S= HAB    eat.TR   ART   dry.coconut  
 ‘Pigs eat dry coconuts’ (GE)
- (2) *Nadai*   *o=*    *za-zangas*    *tomaai*  
 3DU   3DU.S= RED-walk    together  
 ‘The two of them always walked together’ (HE)

(3) [Nam Malaxon] *ka= daa wut, ka= daa wut sop fa-maat ket a*  
*buna avaam*  
 PERS.ART M. 3SG.S IRR come 3SG.S IRR come hit CAUS-die again ART  
 people here  
*aa ka= daa ulai zik awaa ket Ngaavalus*  
 and 3SG.S= IRR return take DIR again Ngaavalus  
 ‘[Malaxon] would come, he would kill again the people here and he would come back to Ngaavalus.’  
 (SH)

Lakurumau speakers use several strategies for the expression of habituality: the realis unmarked form, the irrealis marker *daa*, the habitual marker *vuna*, the progressive marker *nga* and the partial reduplication of the verbal stem. Except *vuna*, they have also functions outside the domain of habituality, too (Table 1.).

Realis (unmarked stem)	All kinds of past and present events (punctual/non-punctual)
Irrealis <i>daa</i>	All kinds of irrealis (future, counterfactual, modal) events (punctual/non-punctual)
Progressive <i>nga</i>	Events that are taking place at the reference time
Reduplication	Events performed by a plurality of actors
Habitual <i>vuna</i>	-

Table 1. Non-habitual functions of Lakurumau TAM markers

Realis predicates can express all kinds of habitual situations: GE, HE and SH (provided they describe past or present events). Irrealis-marked predicates can express HE and SH but not GE. The habitual *vuna* can express GE and HE, but not SH. Finally, the progressive marker *nga* and the stem reduplication can only express HE (Table 2.).

	GE	HE	SH
Realis	√	√	√
Habitual <i>vuna</i>	√	√	
Irrealis <i>daa</i>		√	√
Progressive <i>nga</i>		√	
Reduplication		√	

Table 2. Distribution of Lakurumau strategies to express habituality

As Table 2. shows, Lakurumau marks a distinction between generic and habitual expressions, unlike other Oceanic languages which do not make this distinction (von Prince et al. 2019).

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## From Distance to Immediacy: asyndetic complements in Classical and Present-day Spanish

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Keywords: Complementation, Spanish, Diachronic corpus linguistics, Complementizer deletion, Stylistic variation

One of the most distinctive syntactic features of (pre)classical Spanish is asyndetic complementation, i.e. without complementizer *que* ‘that’, as in (1).

- (1) *Suplicov*<sub>V1</sub>    *a*    *vuestra merced*  $\emptyset_{que}$     *mandev*<sub>V2</sub>  
 beg.PRS.1SG    to    your    mercy    order.SBJV.PRS.3SG  
*recibir essa*    *criatura*.  
 receive.INF    DEM.F.SG    creature  
 ‘I beg Your Mercy you order to welcome this child’ (CODEA-1705)

This diachronic corpus study examines the stylistic distribution of asyndetic complements in Classical and Present-day Spanish, showing that this syntactic variant entered the pole of communicative immediacy from the pole of communicative distance (Koch & Oesterreicher 1985), and that this shift was mediated by the interaction of stylistic parameters with main verb semantics.

Previous research considered asyndeton as a stylistically marked variant, either belonging to formal legal-administrative language (Girón 2005), or to informal private communication (Blas & Porcar 2016). However, Mazzola et al. (2020) showed that, in (pre)classical documents, asyndeton was typically found in deferential requests addressed to prestigious interlocutors (cf. (1)). Hence, asyndetic complementation was allegedly a Latinate marker of language elaboration. According to contemporary grammars, asyndeton is typical of formulaic, formal language (RAE-ASALE 2009: 3231). Yet, Yoon (2015) suggests that, in Present-day Spanish, asyndetic clauses occur equally in formal and informal texts, and that register effect are observed exclusively within the class of request verbs, which select asyndeton especially in formal registers. Thus, here I aim to clarify the diachronic stylistic distribution of asyndeton and its correlation with main verb semantics.

The data come from the CORPES-XXI corpus and consist of some 2,000 finite syndetic and asyndetic clauses with verbs of different semantic classes. The effect of register and formality on the selection of *que* or  $\emptyset$  was evaluated with logistic regression.

The results show that the alternation in Present-day Spanish is not affected by register or formality unless one considers their interaction with the main verb semantics. Asyndetic complements are favoured by request verbs in written formal registers, indeed; however in informal spoken varieties, asyndeton is promoted by cognition and communication verbs.

A comparison of these findings with Mazzola et al.’s (2020) results show that asyndetic complements spread from communicative distance to communicative immediacy. Diachronically, asyndetic complementation increased its frequency with cognition/communication verbs, causing a

discourse-pragmatic change: the subjectification of these verbs as parenthetical epistemic markers, as in (2).

- (2) *pero tan importante como eso* *creo*<sub>V1</sub>  $\emptyset$   
 but so important like DEM.M.SG believe.PRS.1SG  
*eran*<sub>V2</sub> *los malos profesores*  
 be.PST.IPFV.3SG DET.M.PL professor.PL  
 ‘but as important as that I think  $\emptyset$  were the bad teachers’ (CORPES-XXI, oral/internet)

Thus, I argue for a double linguistic and stylistic distribution of Spanish asyndetic complement clauses: (i) they represent a syntactic variant of communicative distance with request verbs; (ii) in the language of immediacy, asyndeton caused the reanalysis of some cognition/communication verbs as epistemic markers.

In conclusion, the findings point at a bidirectional exchange between the two poles: not only vernacular expressions acquire a higher degree of scripturalness by shifting to the pole of distance, but also grammatical markers of the communicative distance shift to the pole of immediacy, developing pragmatic and subjective functions.

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## Addressee-centered evidential markers in talk-in-interaction. The case of Italian ‘vedere’+‘che’ constructions

Johanna Miecznikowski, Elena Battaglia & Christian Geddo

This contribution examines evidential uses of constructions with the Italian verb ‘vedere’ (‘to see’)+‘che’-complement clause, focusing especially on forms referring (also) to the addressee (A).

Perception verbs, especially verbs of seeing, are polysemous and subject to diverse metaphorical extensions (Viberg 1983, Sweetser 1990, Cacciari 1991, Ibarretxe-Antuñano 2008, Johnson/Lenci 2011, San Roque et al. 2015, Szczyrbak 2019:25-27). This makes them versatile lexical means which can express various information sources when taking scope over a proposition *p* currently asserted/hypothesized by the speaker (S) (cf. Aijmer 2004, Whitt 2010, Kendrick 2019 on English ‘see’-constructions; Cornillie/Gras 2015, Kotwica 2017, Albelda/Jansegers 2019, Estellés/Albelda 2020 on Spanish ‘ver’-constructions; Schuring/Dendale 2020 on French ‘à ce que je vois’).

In Italian, evidential meaning has been attributed to the semi-grammaticalized impersonal, intersubjective (Nuyts 2012) construction ‘si vede’+‘che’-complement clause (Pietrandrea 2005:60-67, 104-105, 2007:43). We describe the entire paradigm of Present forms of ‘vedere’+‘che’ referred to S and/or A with particular attention to addressee-centered evidential expressions. There is not much research about A-centered evidential markers in general (but see Kendrick 2019); as to 2nd person forms of Italian ‘vedere’, existing studies describe their parenthetical uses as discourse markers (Bazzanella 1995:235-236, Ghezzi/Molinelli 2015, Fedriani/Ghezzi 2020) without considering either their combination with ‘che’-clauses or possible evidential meanings.

Our analysis is based on three corpora of spoken Italian, LIP (De Mauro et al. 1993), C-Oral-Rom (Cresti/Moneglia 2005), KIParla (Mauri et al. 2019), and on a corpus of video-conference meetings published on Youtube. The dataset comprises 298 tokens of ‘vedere’+‘che’ (‘vedo’=67, ‘vedi’ and the polite form ‘vede’=80, impersonal=70, ‘vediamo’=24, ‘vedete’=57). For each token, we will determine (a) the meaning of ‘vedere’ (direct visual perception, perception of visual structure, interpretation of written/graphical data, mental vision, repeated experience, inference based on visual cues, inference not based on visual cues); (b) if the embedded *p* is the content of an assertion/hypothesis by S (m-performative vs. non m-performative uses, Nuyts 2000);

(c) the experiencers of the process denoted by the verb (S, A, both). This annotation will allow us to identify evidential uses (which must be m-performative, (b)) and to classify the type of source expressed in terms of (a) and (c). We expect to find that all constructions can convey evidential meaning, with varying preferences for source types. Zooming in on evidentially used 2nd-person forms, we will show that, similarly to ‘si vede’+‘che’, they indicate an intersubjectively accessible source within the evoked evidential frame. However, by explicitly attributing the experiencer role to A in the process of acquiring *p*, speakers obtain (at least) two specific effects. First, since A has more epistemic authority (Heritage 2012) than S with regard to A’s perception/cognition, 2nd-person forms tend to function as confirmation requests, sometimes underlined by interrogative prosody. Second, by foregrounding A’s perspective, S may underline the source’s particular relevance for A, e.g. during a demonstration in a teaching context.

The quantitative and qualitative analysis illustrates how semantic, deictic and pragmatic aspects can usefully be integrated to describe intersubjective markers of information source in talk-in-interaction.

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## **Crosslinguistic influence in Second Language Acquisition: post-verbal subjects in L2 English**

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Key words: adult learners, intermediate level, Macedonian, locative inversion

This presentation discusses the use of post-verbal subjects by English learners with L1 Macedonian. English allows VS inversion only marginally due to its highly grammaticalized SVO word order with an obligatorily filled subject position (Biber et al. 1999), while in Macedonian, a null subject language with flexible WO, inversion is a common discourse strategy. Considering the typological differences between L1 and L2 it can be assumed that Macedonian learners of English will transfer the WO features of their L1 onto L2 English producing erroneous sentences. To test this hypothesis we investigate the ways crosslinguistic influence affects the acquisition of subject variation in L2 syntax. To determine the occurrence of post-verbal subject constructions in learner language, we examined their distribution in the writings of intermediate students. The obtained data revealed the use of two basic types of inversion constructions: constructions with locative inversion and constructions with *it*-insertion. The former fall into several subtypes: passive constructions (*In this graduation paper was developed the topic of complementation of the cognitive verbs*), active constructions with intransitive (often unaccusative) verbs (*At the ceremony can come all invited people, In this class belong the verbs such as think*), and constructions with transitive verbs (*In the production of vowels important role plays the tongue*). The second type of subject inversion involves *it* insertion in passive constructions (*In some schools, it is studied the German language*).

This preliminary examination supports the observation that Macedonian learners produce either grammatically unacceptable or stylistically inappropriate VS sentences in English, but more evidence was needed to account for the dynamics of the acquisition process. Since the post-verbal subject construction displays interface of the syntax with semantic, discourse and phonological levels (Lozano and Mendikoetxea 2010), our primary interest was to focus on the role of factors shaping the acquisition of subjects in English. To test the hypothesis that the discourse constraints are more difficult to acquire than semantic and formal ones we conducted a Recognition and Correction Test (RCT) with two groups of adult learners (66 intermediate and 74 advanced), and compared the results with assessments of 100 native speakers of English. The results show that learners accept post-verbal subjects in contexts judged inappropriate by native speakers because they rely heavily on the information structure principles of their L1. The overuse of inverted subjects is higher at the intermediate level, but inappropriate acceptance is evident at the advanced level, as well. Further

analysis should show if overuse persists especially in those contexts that involve discourse considerations.

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## Duration adjustment mechanisms in Ukrainian: The case of pretonic lengthening

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Keywords: duration, pretonic lengthening, lexical stress, Ukrainian, acoustic phonetics

Temporal adjustments are common in different loci, the most widely described prosodic positions causing an increase in duration include word boundaries and metrically strong positions. Less known is the presence of lengthening in the syllables immediately preceding lexical stress, attested in Catalan (Chitoran and Hualde 2007), Russian (Kasatkina 2005), and in East Slavic dialects (Bethin 2006). The phenomenon of pretonic lengthening is interesting because by reducing the temporal difference between the pretonic and the tonic syllable, pretonic lengthening weakens the durational cue to lexical stress.

Duration is a robust cue to lexical stress in Ukrainian. A subtle increase in duration has also been observed in immediately pretonic positions. The existence of such lengthening has gone unnoticed in the traditional descriptions, and although recent acoustic research (Łukaszewicz and Mołczanow 2018a,b,c) has pointed to its presence in Ukrainian, this phenomenon has not been systematically investigated. This study reports on duration measurements of the vowel /a/ in three prosodic conditions (initial – second – pretonic), based on the data collected from 12 speakers. All the words had the structure  $[\sigma\sigma'\sigma(\sigma_{1-2})]$ , with lexical stresses always falling on the fourth syllable, as illustrated below.

(1) Prosodic position	Example
initial $\underline{\sigma}\sigma'\sigma(\sigma)$	<i>z<u>a</u>paku 'vaty</i> ‘to pack’
second $\sigma\underline{\sigma}\sigma'\sigma(\sigma)$	<i>nez<u>a</u>pe'rečnyj</i> ‘unquestionable’
pretonic $\sigma\sigma\underline{\sigma}'\sigma(\sigma)$	<i>peres<u>a</u>'dyty</i> ‘to transplant’

Participants read target words embedded in a frame. Measurements from 852 segments (8 tokens x 3 repetitions x 12 speakers; 12 vowels were excluded due to disfluencies) were entered into statistical analyses. Linear mixed effects models were built to test the effect of position on vowel duration. Intercepts and slopes for speaker and item were included in the random structure. The results demonstrate that though pretonic vowels are longer from both the vowels in the initial and the second position (see Fig. 1), significant results were obtained for the pretonic vs. initial positions ( $\beta = -11.92$ ,  $SE = 4.43$ ,  $t = -2.689$ ,  $p < 0.05$ ), but not for the pretonic vs. second positions ( $\beta = -7.33$ ,  $SE = 4.43$ ,  $t = -1.656$ ,  $p = 0.108$ ).

The functionality of this prominence-related duration effect remains unclear. Bethin (2006) argues that pretonic lengthening in East-Slavic dialects is caused by high tone, which is associated with a syllable immediately preceding main stress. However, the lengthening effect detected in Ukrainian is very subtle in comparison with that reported for the East-Slavic dialects, and available F0 measurements (Łukaszewicz and Mołczanow 2018c) do not reveal any pitch rise on pretonic syllable. Łukaszewicz and Mołczanow (2018a,b) have demonstrated that the effect of pretonic lengthening is bigger than the effect of rhythmic stress, and that the regular alternation of rhythmically stressed and unstressed syllables is distorted in the vicinity of lexical stress. As initially suggested in Łukaszewicz and Mołczanow (2018c), these facts indicate that the existence of pretonic lengthening in Ukrainian is unconnected to rhythm, but is related to the domain of lexical stress, which appears to extend beyond one syllable. This phenomenon may reflect a more universal anticipatory effect induced by lexical stress.

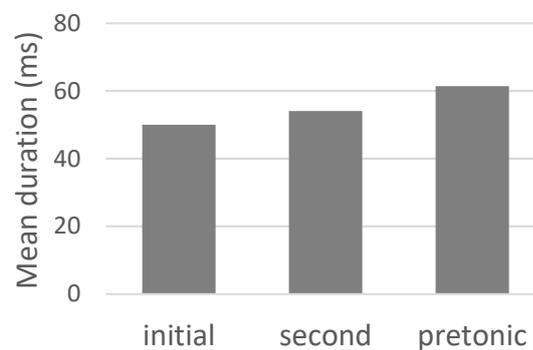


Figure 1. Mean vowel duration (ms) depending on position.

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## The athematic infinitives in old Sardinian

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Keywords: Sardinian, infinitive, Distributed Morphology, thematic vowel, allomorphy

In old Sardinian, we find, within the second verb class, an allomorphy between infinitive forms. Next to the rhizotonic infinitives in *-er* (*vender* ‘to sell’, *peter* ‘to ask’) there is a subclass of rhizotonic infinitives that present a form at first sight “shortened” that is accompanied by the lengthening of the consonant of the root (*cherre* instead of *\*cherer* ‘to ask, to want’, *tenne* instead of *\*tener* ‘to hold’). Previous analyses (Wagner 1984, Blasco Ferrer 1984, 2003, Molinu 2013) have treated the evolution of these “short” forms on the assumption that one must subtract or add phonological material to a form that is already perfectly constructed.

Wagner in particular (cf. Wagner 1984: § 31), proposed a rule of syncope for infinitives of the *morre* type < *\*morĕre*, and a lengthening of the nasal for infinitives of the *tenne* type (cf. Wagner 1984: § 207). This lengthening would be due to the proparoxytonic accentuation of the infinitives (*\*tĕnere* > *\*tĕnnere* > *tĕnne*), which would thus simply follow a tendency in the Sardinian lexicon to lengthen this consonant in proparoxytonic words (cf. *ĕnneru* < GENĚRU(M) ‘son-in-law’, *tĕnneru* < TENĚRU(M) ‘tender’).

To this analysis that appeals to phonology, invoking segmental and prosodic constraints, I contrast another that, inspired by the principles of *Distributed Morphology* (cf. Halle & Marantz 1993, Embick 2013, 2016, Calabrese 2015a-b), puts the emphasis on the conditions of locality between morphemes and exponents and reduces the weight of lexicon and phonological output constraints. In fact I assume that, in a period not documented in early texts, alongside the thematic forms (*pet-e-re* ‘to ask’) there were athematic roots that, by associating themselves with the exponent of the infinitive morpheme, would have triggered, in some cases, a process of progressive assimilation, through a readjustment rule (cf. (1)):

(1) thematic infinitives	vs	athematic infinitives
<i>*pet-e-re</i>	‘	<i>ten-re</i>
<i>petere</i> ‘ask-TV-INF.’		<i>tenne</i> ‘hold-INF.’

Later, the infinitives in *-ere*, therefore thematic, have been reduced in old Sardinian, to *-er* because of a reinterpretation of the final vowel as an epenthetic vowel (cf. Pittau 1972<sup>2</sup>: 98).

In the second verb class, we thus went from a situation where we had a single exponent (*-re*) and two types of radicals, thematic and athematic (cf. (2)), to a system that had two types of radicals and two suffix allomorphs. The two suffix allomorphs or rather the *Vocabulary Items* (VI) enter into competition. This competition is governed by locality conditions. The VI that inserts *-re* which is specific to roots such as *mor-*, *pon-* etc. must be adjacent to the root. The presence of the thematic vowel interrupts this adjacency, leading to selection the VI *-r*:

(2) <i>ponne</i>	<i>peter</i>
a. athematic	b. thematic
[[[ <i>pon</i> ] <sub>R</sub> ] <sub>v</sub> <i>re</i> ] <sub>T</sub>	[[[ <i>pet</i> ] <sub>R</sub> <i>e</i> <sub>TV</sub> ] <sub>v</sub> <i>r</i> ] <sub>T</sub>
<i>ponne</i> ‘put- INF.’	<i>peter</i> ‘ask-TV-INF.’

Hence the well-documented alternation, as mentioned above, in the early Sardinian documents where the *peter* type ‘to ask’ alternates with the *ponne* types ‘to put’.

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Proper names in the Nakh-Daghestanian languages

Zarina Molochieva & Zaira Khalilova

<not updated>

## Inferring recent evolutionary changes in speech sounds

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Keywords: language evolution, phonology, language contact

We investigate recent changes in the frequency distributions of speech sounds in the world’s languages and explore the impact of language contact in the past few thousand years. Based on three extensive phonological databases, we analyze the discrepancies between the distribution of speech sounds reported in ancient and reconstructed languages (BDPROTO; Marsico et al. 2018, Moran et al. 2020), on the one hand, and those in present-day languages (PHOIBLE; Moran & McCloy 2019), on the other. We investigate whether the difference between these two databases is a function of segment borrowing as reported in SegBo, a database of borrowed sounds (Grossman et al. 2020a, 2020b).

Our null hypothesis is that there is no relationship between the segment frequencies in BDPROTO and PHOIBLE, and those found in SegBo. The alternative hypothesis is that the most frequently borrowed segments will correspond to those segments that distinguish BDPROTO and PHOIBLE.

First, we operationalize the difference between any two frequency distributions as the Jensen-Shannon divergence (JSD). JSD is a measure of how much information on average one would need to transform one frequency distribution into another, i.e., information regarding how probabilities per outcome must be shifted so that the distributions match. Second, we use JSD to compare the segment frequency distributions in each database. Third, we implement statistical resampling methods to account for any genealogical or areal biases in the databases. Finally, we use Poisson regression to model SegBo segment frequency as a function of PHOIBLE and BDPROTO segment frequencies.

Our analysis does not support the null hypothesis of time-independence of cross-linguistic distributions. Rather, it supports the alternative hypothesis explored. We report our two main findings. First, we find substantial differences between ancient and reconstructed languages, on the one hand, and present-day languages, on the other. Figure 1 illustrates the model differences between PHOIBLE and BDPROTO as they relate to SegBo frequencies. Digging into the results, the distributions of specific speech sounds (those that are drawn to the median frequency band), in particular fricatives and affricates, have increased in frequency over time.

Second, and crucially, the greatest disparities between earlier and present-day distributions turn out to be largely due to those sounds that have spread in the world's languages due to relatively recent borrowing events. The result of these mass borrowing events in recent times is that languages have become more homogeneous, with correspondingly reduced areal-specific profiles, in terms of their phonological inventories. In this respect, the period in the past 500 years or so seems to have been a watershed in the evolution of phonological systems.

Our findings suggest that what has been called the *Implicit Uniformitarian Hypothesis* (that cross-linguistic distributions of linguistic properties, whether simple or complex, have always been more or less the same) -- at least with respect to the composition of phonological inventories -- cannot be held uncritically. Linguists who would like to draw inferences about human language based on present-day cross-linguistic distributions must consider their theories in light of even short-term language evolution.

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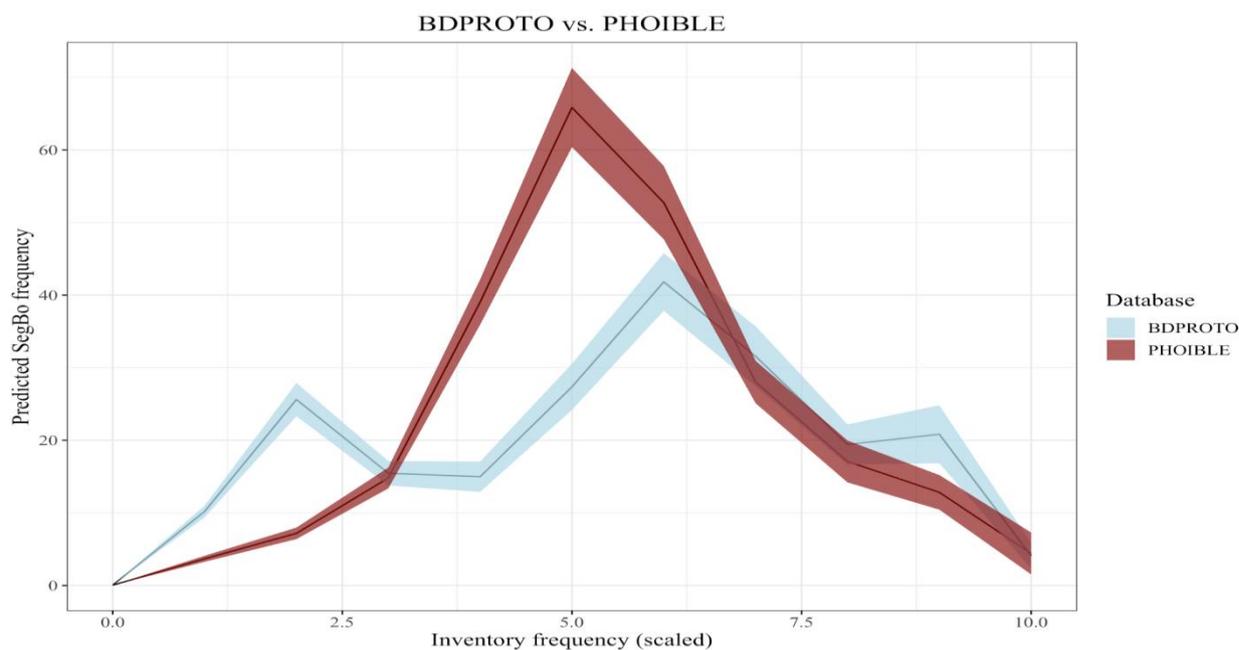


Figure 1: Changes in segment frequency distributions in relation to borrowing frequency

Final Lengthening in Paraguayan Guarani: Phonological and Morphosyntactic Variables

Ricardo Napoleão de Souza & Josefina Bittar  
<not updated>

## **In-group and out-group perceptions of a Greek L2 variety: The case of Albanian Greek**

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Keywords: social perception, Albanian Greek, emblematicity, in-group, out-group

Since their arrival in Greece in the early 1990s, Albanian immigrants have been stigmatized in the Greek consciousness as “cunning”, “primitive”, “untrustworthy”, “dangerous” and “criminal” (Lazaridis & Wickens 1999, 648). Their L2 Greek (Albanian Greek, or Alb-Grk) has not passed unnoticed either and numerous jokes and internet memes can be found that target the variety and its speakers. In the present paper we focus on the social perception of Albanian Greek as it is presented in memes by members of the Albanian community in Greece and by members of the host community (i.e. Greeks), gauged via a matched guise perception experiment.

The experiment itself examined the perception of two variables: (x) and (ç) and their respective variants [x]-[k] and [ç]-[k]-[ç̣] as found in a collection of 47 memes. These variants were embedded

in the experiment in words that are emblematic of the speech of Albanian immigrants (e.g. the words for ‘knife’ and ‘grass’) and in non-emblematic words. We identify as the former words that frequently carried Alb-Grk features in the memes, and as the latter words that are not emblematic but offer the environment for the emergence of the same features. Social perceptions were sought from Albanian immigrants and Greeks alike to examine possible effects of in-group and out-group identity. Participants in the study were asked to rate their agreement with various statements about the talkers of audio stimuli in the following 6-point Likert scales: Albanianness, ruralness, positive attributes (friendliness, likeability, politeness, sensibility), and negative attributes (aggressiveness, criminality, cursing).

Generally, the talkers who produced Alb-Grk variables embedded in emblematic and non-emblematic words were perceived as more Albanian and rural, and as having fewer positive attributes and more negative ones, outcomes which are consistent with the general reception of Albanians in Greece. Moreover, Albanians evaluated [k] and [çç] as equally Albanian, but Greeks evaluated [k] as more Albanian than [çç], indicating different awareness about the nature of Alb-Grk which may reflect respectively their in-group versus out-group experience on the L2 variety. In some cases, Albanians judged the Alb-Grk variants less positively than Greeks did, covertly penalizing their compatriots who allow their Albanianness to show. We say ‘covertly’ here because talkers are penalized by being dissociated from positive traits, but not by being associated with negative traits. At the same time, Greeks are the one who associated Alb-Grk talkers with negative attributes indexing, thus, more overt racist ideologies.

Concluding, by focusing on Alb-Grk we add to the social speech perception literature which has neglected contemporary ethnic varieties, and we show that listeners are sensitive to phonological and lexical features when making judgments about talkers. Here, those judgments converge to a single indexical field (Eckert 2008) for Alb-Grk features which is constituted by associations of ruralness and negative social attributes, but also by dissociations from positive attributes. We also show the differential awareness between Albanians and Greeks of what an Alb-Grk variety looks like as well as the two ethnic groups’ overt and covert racist ideologies about the ethnic variety’s speakers.

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## **Constructional attrition in a radically usage-based model of language (change)**

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Keywords: diachronic construction grammar, usage-based model, Entrenchment-and-Conventionalization model, individual differences, constructional attrition

Situated in the burgeoning discipline of diachronic construction grammar (cf. Barðdal et al. 2015, and Noël and Coleman 2021), this paper aims to contribute to a radically usage-based (Noël 2016) theoretical account of the phenomenon of ‘constructional attrition’, which is the term coined by Coleman and Noël (2012) to refer to the, either fully accomplished or only incipient, gradual

disappearance of a construction from a language. The approach taken will be to explore how the phenomenon can be accommodated in Schmid's (2020) Entrenchment-and-Conventionalization model (or EC-model). This theory of "the dynamics of the linguistic system" is 'radical' in its usage-based account in that it separates collective conventionalization from individual entrenchment and models how they interact in usage. Schmid focuses on the accumulative dynamics of the system, however, and gives scant attention to subtractive/ attritional developments. Considering data from two corpus studies on the development of the so-called DEONTIC NCI construction (SUBJ *BE obliged/forced/permitted/... to* INF) (Noël 2008, and Disney 2016), one on its language-level decline during the Late Modern English period (Noël 2019) and one on how its speaker-level use evolves over the writing careers of a number of Late Modern English authors (Noël, under review), the paper brings to bear the EC-model's conceptual apparatus to gauge the role of individual speakers in language-level constructional attrition. It will be argued that while a sociopragmatic factor can be identified that is likely to have acted as a 'force' on usage and conventionalization, contributing to a 'reversal' in the conventionalization of the schema, there are good reasons to hypothesize that reversed 'routinization'/entrenchment in individual speakers is the leading process in its language-level attrition rather than collective reversed 'usualization'. These reasons pertain to individual differences of two sorts: in the second of the two studies referred to, a sizeable group of authors maintains a stable level of entrenchment of the schema that remains below the corpus average throughout their writing careers, and another group of authors displays internal attrition of the construction to a level below the corpus average, i.e. they exhibit a decrease in their level of entrenchment of the construction that parallels the external development. The combination of these observations suggests that constructional attrition, at least the kind illustrated by the example of the DEONTIC NCI schema, is in large part the effect both of what Labov (1984) calls 'generational change' and of what Sankoff (2005) terms 'lifespan change', rather than being a case of what Labov (1984: 84) labels as 'communal change', in which "all members of the community alter their frequencies together". In Schmid's EC-model, the latter would be language change in which the conventionalization process of (reversed) usualization takes the lead, while both generational change and lifespan change are led by (reversed) routinization. Schmid's radically usage-based model can therefore equally usefully be applied to account for subtractive developments as for accumulative ones.

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### **Typological convergence in the Central Baltic area**

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Keywords: morphosyntax, syntax, phonology, language contact, Southern Finnic languages

The Circum-Baltic area is a meeting point for the languages of two language families – Uralic and Indo-European. The present paper discusses the impact of contacts between Finnic and Baltic languages that have lasted for more than two thousand years (Lang 2018; Balode & Bušs 2007). In our study we focus on the comparison of selected phonological, morphological, and syntactic features in the southernmost Finnic and neighbouring Baltic varieties in order to discover their mutual influences and common typological developments. The Finnic varieties included in the study are Standard Estonian; Võro, Seto, and Mulgi (South Estonian varieties); Lutsi, Leivu, and Kraasna (South Estonian language islands in Latvia and Russia); Courland Livonian and Salaca Livonian. The Baltic languages are represented by Standard Latvian and Latgalian. Some comparisons are also made with Standard Russian and local Russian varieties. Although the formation of the Southern Finnic area and contacts between the languages in this region have gained attention in various studies (e.g., Dahl & Koptjevskaja-Tamm 2001a, 200b; Seržant 2015; Vaba 2011, Wälchli 2011, Wiemer et al. 2014), there are no comparative studies that concentrate on systematic comparison of all these varieties by including a considerable number of linguistic features belonging to several linguistic levels.

Our research questions are to what extent we can find similarities between (i) neighbouring cognate languages/language varieties, (ii) neighbouring languages that are not cognate languages, (iii) close cognate languages that are not spoken in close proximity. We hypothesise that similarities most commonly exist between language varieties spoken in close proximity, also involving non-cognate varieties. In addition to features that have been subject to change as a result of multifaceted contact situations in the area, we expect to find features that have been relatively stable over time.

The linguistic data on the selected varieties were mainly obtained from language corpora (e.g., EDC) and various literary sources, such as text collections (e.g., Mets et al. 2014) and grammar books (e.g., Nau 2011). Initially we filled out a typological questionnaire containing about 50 questions on phonology and 150 on morphology and syntax; however, in this paper we concentrate on features that can be subsumed on (i) four morphosyntactic topics: case-marking and noun phrases, comparative

constructions, person-indexing and pro-drop, and negation; (ii) two syntactic topics: coordination and interrogation (yes-no questions); and (iii) ten phonological features.

Our initial results show that the studied varieties pattern together in more than one way, involving language varieties from three different language branches: Finnic, Baltic, and Slavic. For example, in several instances Kraasna, Võro, Seto, and Lutsi pattern together, while Leivu is closer to Mulgi and Salaca Livonian (e.g., in the case of standard negation). Whereas Lutsi and Kraasna show greater Russian influence, Leivu has adopted more from Latvian. Both pattern and matter borrowings can be found. We expect that our findings and further research will enable us to further clarify the nature and outcomes of mutual contacts within the studied area by assessing the criteria and probability of typological shift for each language.

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The emergence of definiteness Marking from Evaluative Morphology in Persian: Internal Variation and Diachronic Pathway

Maryam Nourzaei  
<pdf>

## Verbal diminutive morphology in the Colombian Spanish from the Andes

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Keywords: Andean Spanish, verb, affixes, diminutives, valuation

The aim of this work is to describe the verbal diminutive morphology (Dressler & Merlini 1994, Booij 2018) and its connotations (Lázaro 1999, Ponsonnet 2018) in a Spanish variant from the Colombian Andes. The data were collected in the municipality of Ipiales-Nariño, Colombia; the examples come from oral sources.

The main contribution lies in the fact that this phenomenon has not been studied or reported (Toscano 1953), as in the standard Spanish diminutives only attach to nominal bases. We show that the diminutives appear as a verbal suffix in four types of request constructions, with three functions: 1) it helps to attenuate the illocutionary force of the clause; 2) it signals an affectation in one of the arguments and 3) it adds a manner value to the denoted event. The four constructions are the following:

1) Benefactive ditransitive clauses with an ‘extra’ verbal form *dar* ‘give’ functioning as an applicative/auxiliary:

- |   |    |   |                         |                     |
|---|----|---|-------------------------|---------------------|
| 1 | a. | Da=me=l- <b>it</b> -o<br>give.AUX.APP.2PRS.IMP=1DAT=3ACU- <b>DIM</b> -MAS<br>‘Clean the car for me, please, if you are so very kind.’ | limpia-ndo<br>clean-GDO | el=carro<br>ART=car |
|   | b. | Vacún-a=me<br>vaccinate-2PRS.IMP=1DAT<br>‘Vaccinate the sheep for me.’  | la=oveja<br>ART=sheep   |                     |

(1a) is in imperative mood, but the presence of both the diminutive and the *dar* form render a very highly attenuated construction in illocutionary terms, as can be seen from the contrasts in the translations of (1a) and (1b), which is a plain imperative. The diminutive appears affixed to the accusative clitic pronoun, which is attached to the *dar* form. Its presence requires the simultaneous coding of the DO, so a certain focalization in its reference is implied.

2) Benefactive ditransitive clauses without the *dar* form -(2a)-. This implies a lesser degree of attenuation than that in (1a), although it implies a clearer focalization on the DO. Both examples are in the imperative of future mood.

- |    |    |  |                                |
|----|----|--|--------------------------------|
| 2. | a. | Cocin-a-ra=me=l- <b>it</b> -a-s<br>cook-VT-2FUT.IMP=1DAT=3ACU- <b>DIM</b> -FEM-PL<br>‘Cook the potatoes (these very ones/no others) for me.’ | las=papa=s<br>ART.PL=potato=PL |
|    | b. | Cocin-a-ra=me=l-a-s<br>cook-VT-2FUT.IMP=1DAT=3ACU-FEM-PL<br>‘Cook the potatoes for me.’  | las=papa=s<br>ART.PL=potato=PL |

3) Participial verbal forms. The diminutive marks an affectation in the referent of one of the arguments: the subject in (4a), which is a passive construction, and the DO in (4b), a resultative one. The diminutive also adds a manner value in the denoted event:

3. a. La=avena fue cortad-**it**-a bien bajito  
 ART=oats be.3PST cut.PRTC-DIM-FEM good short  
 ‘The oats were cut in a very delicate way until they were very thin.’
- b. Bien cosechad-**it**-o (las=habas)  
 wgood harvest.PRTC-DIM-MAS (ART=bean)  
 ‘Harvest the beans very carefully, in order to get them in their finest form’

4) Gerund clauses -(4)-. The value added by the diminutive completely falls on the action denoted by the gerund; the illocutionary force is still attenuated, but to a lesser extent than in all the previous constructions.

4. Vaya corrie-nd-<**it**>o  
 go.2PRS.IMP run-GDO<DIM>  
 ‘Go running, hurry up.’

Finally, we address the question raised by the morphological relation between the diminutive morpheme and the clitic pronouns that host it. The fact that the diminutive appears embedded inside the clitic seems to indicate that the clitic does have morphological structure.

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## Constructions with DE in Gascon: A Romance perspective

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Keywords: Gascon, partitive article/pronoun, indefiniteness, geographical distribution, language variation

This paper focuses on constructions instantiated by a bare noun followed by DE + definite article + adjective (1a) in Southern Gascon and compares them to similar structures in Gascon, and in the contact languages French, Occitan and Catalan. The constructions under investigation alternate with

phrases consisting of the bare preposition DE + adjective + noun (1b), and with phrases without any preposition (1c). Semantic factors play a role in the actual choice the speakers make.

- (1) a. ke 'bu<sub>i</sub> 'pa deb 'bu  
 that want.1SG bread(M) of.SG.M good.SG.M  
 b. ke 'bu<sub>i</sub> de 'bu 'pa  
 that want.1SG of good M.SG bread(M)  
 c. ke 'bu<sub>i</sub> 'bu 'pa  
 that want.1SG good.SG.M bread(M)  
 'I want some good bread' (Chèze, LMA, born 1935)

As shown in (2a), the whole indefinite non-referential noun phrase 'bi deb 'bu can be replaced by the clitic *en*, which is indefinite in interpretation, whereas resumption with a direct object clitic (2b) is ungrammatical. No intervening material can appear between the noun and DE + definite article (2c).

- (2) a. ('bi deb 'bu), ke n ε<sub>i</sub>  
 wine(M) of.SG.M good.SG.M that PARTV= have.1SG  
 be'byt dab za'no  
 drunk with Jeanne  
 b. ('bi deb 'bu), ke \*\*l ε<sub>i</sub>  
 wine(M) of.SG.M good.SG.M that OD= have.1SG  
 be'byt dab za'no  
 drunk with Jeanne  
 c. \*\*'bi, ke n ε<sub>i</sub> be'byt dab za'no,  
 wine(M) that PARTV= have.1SG drunk with Jeanne  
 deb 'bu  
 of.SG.M good.SG.M  
 '(lit.) some good wine, I have drunk of it with Jeanne' (Chèze, JLM, born 1940)

The constructions in (1a) can be compared with those in DE + adjective (but without an article realising gender and number features) (3a), which can alternate with phrases without DE (3b), like in French (3c).

- (3) a. k ε ya ðen de ku'paðo  
 that have.1SG INDF.SG.F tooth(F)[SG] of broken.SG.F  
 b. k ε ya ðen ku'paðo  
 that have.1SG INDF.SG.F tooth(F)[SG] broken.SG.F  
 c. j' ai une dent (de) cassée  
 1SG have.1SG INDF.SG.F tooth(F)[SG] of broken.SG.F  
 'I have a broken tooth'

A look at the spatial distribution of both constructions (1a) and (3a) in the *Atlas Linguistique et Ethnographique de la Gascogne* (ALG) – see maps 633 'du fil noir' and 2505 'attribut de l'objet' – reveals that they overlap widely occurring mainly in the Pyrenean area.

Based on a detailed analysis of both ALF (*Atlas Linguistique de la France*) and ALG data and of new questionnaire data collected during original fieldwork in the Pyrenees since 2016 and documented in my on-going project MAGY (*Morphosyntactic Atlas of Gascony*), I will disentangle: (i) the syntactic contexts and the semantic and pragmatic properties of constructions with *deb* (1a)

compared with the alternating constructions with *de* (1b) and without preposition (1b); (ii) the ‘en’-type of pronominalisation; (iii) the parallel with constructions in DE + adjective. Taking a Romance perspective, I compare the Gascon data with the constructions in DE + adjective in French (see Lagae 1998), in Occitan (Sauzet 2014), and in Catalan (Martí 2010).

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## Ad hoc concepts and non-propositional meaning

Manuel Padilla Cruz

Speakers can express emotions, affective attitude and epistemic stances by means of a wealth of linguistic elements. These include attitudinal adverbials like ‘happily’ or ‘sadly’ (1); illocutionary adverbials like ‘frankly’ or ‘seriously’ (2); evidential adverbials like ‘obviously’ or ‘clearly’ (3), *hearsay* adverbials like ‘allegedly’ or ‘reportedly’ (4), and some parenthetical expressions like ‘they say’ or ‘I hear’ (5). Similar functions are fulfilled by the indicative mood (6), some modal verbs (7) and reporting verbs (8):

- (1) Sadly, Lucy hates opera.
- (2) Frankly, Lucy hates opera.
- (3) Clearly, Lucy hates opera.
- (4) Allegedly, Lucy hates opera.
- (5) Lucy hates opera, I hear.
- (6) Lucy hates opera.
- (7) Lucy might hate opera.
- (8) They say that Lucy hates opera.

Paralinguistic elements such as interjections (9), intonation, facial expressions and gestures also help speakers convey information about their attitudes and psychological states:

- (9) Alas, Lucy hates opera!

In relevance-theoretic pragmatics, information about the speaker's attitude, emotions, feelings and stances has traditionally been argued to be mentally represented as part of the *higher-level explicature* of an utterance. This is some sort of mental schema describing the speaker's psychological state or the action that she performs verbally:

(10) Speaker is sad/regrets/says/believes/doubts [*p*]

The construction of this type of explicature has also been claimed to be assisted by such linguistic and paralinguistic elements (Ifantidou 1992, 1993, 2001; Wharton 2009; Wilson and Sperber 1993, 2002, 2004; Wilson and Wharton 2006).

This presentation will suggest that information about the speaker's emotions, attitudes or stances needs not solely be represented within the higher-level explicature. Rather, it may be part of the conceptual components of the pragmatically enriched logical form of utterances, or the *lower-level explicature*.

This presentation will propose that adjustment of the linguistically encoded conceptual material, one of the inferential tasks necessary for constructing lower-level explicatures (Carston 2000, 2002), may result in the addition of beliefs about the speaker's emotions, affective attitude or epistemic stance to the encyclopaedic entry of a concept. If conceptual adjustment is approached as the activation of occasion-specific mental folders, or *ad hoc concepts* (Carston 2013), it could alternatively be posited to cause such mental folders to harbour that type of beliefs. Linguistic elements like evaluative morphemes, expressive expletives and evidential participles will be shown to make those beliefs manifest and to trigger the lexical pragmatic processes conducive to their storage in the encyclopaedic entry of a concept or in the mental folder activated by a particular content word.

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## **On the ambiguity of *se*-clauses and the role of natural reflexivity in Brazilian Portuguese**

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Keywords: *reflexivity, reciprocity, ambiguity, Romance, Brazilian Portuguese*

We explore two issues in Brazilian Portuguese (BP): (i) the semantic and the morpho-syntactic properties of natural reflexive verbs (NRVs); (ii) the ambiguity between reflexivity and reciprocity in plural *se*-clauses. We provide novel data on these two phenomena and we show that they are empirically related.

**(i) Natural Reflexivity** NRVs denote events that are expected to have the two semantic roles referring to the same entity (Kemmer, 1993). NRVs have different interpretations from anaphoric reflexives (Doron & Rappaport-Hovav, 2009) and in some languages they may exhibit Disjoint Reference Effect (DRE) (Spathas, Alexiadou & Schäfer, 2015).

It is traditionally assumed that all Romance languages require the clitic *se/si* to express reflexivity (Reinhart & Siloni 2005, a.o.); however, some BP verbs can denote reflexivity without this element (1). We propose that such verbs are NRVs and they may exhibit DRE, but require the volitional participation of the subject: (1) is true if João depilated himself or if he willingly went to the beauty salon for depilation.

- (1) João (se) depilou  
João SE depilated  
'João depilated (himself)'

**(ii) Ambiguity** BP *se*-clauses can denote reflexivity or reciprocity (2). The reflexive/reciprocal polysemy is widespread across several languages (Heine & Miyashita, 2008) and it has been semantically treated as an instance of underspecification (Murray 2008, Cable 2014, Haug & Dalrymple 2020). We propose instead that BP *se*-clauses are ambiguous between reflexivity and reciprocity and we provide empirical evidence from the identity test (Zwicky & Sadock, 1975), showing that reflexive and reciprocal interpretations are not simultaneously available: (2) cannot truthfully describe João thanking himself and Bia and Maria thanking each other. We show that with NRVs, however, reflexivity and reciprocity may be concurrently available in plural *se*-clause, as a result of the lexical semantics of these verbs: possible DRE and volitional participation hold for each individual in the subject.

- (2) João, Bia e Maria se agradecem  
João, Bia and Maria SE thank  
'João, Bia and Maria thank themselves/each other'

We collected judgments on the interpretation of NRVs and on the concurrent availability of reflexive/reciprocal readings in plural *se*-clauses (with NRVs and transitive verbs) using a questionnaire on 154 native speakers of BP. Our data confirm that (i) NRVs may exhibit DRE while requiring volition of the subject; (ii) only NRVs allow simultaneous reflexive/reciprocal interpretations, while this reading is ruled out with other verbs, suggesting ambiguity of *se*-clauses.

This talk proposes: (I) an analysis of NRVs in BP as intransitive predicates without obligatory co-reference between agent and theme, requiring the volitional participation of the subject, (II) a treatment of reflexivity and reciprocity in BP as derived from two distinct operators, licensed in parallel morpho-syntactic environments but semantically independent of one another.

These proposals contribute to the understanding of the relation between reflexivity and reciprocity and to the manifestation of natural reflexivity in BP. We also illustrate the effects of natural reflexivity on tests intended to determine the underspecified or ambiguous nature of plural *se*-clauses: such effects may hold cross-linguistically and further research should take them into account.

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## Metadiscursive discourse markers in a corpus of Italian migrants in Munich

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Keywords: metadiscursive markers, Italian migration, language contact, migrant generations

The present study focuses on the use of metadiscursive discourse markers (DMs) in the context of Italian migration varieties. In particular, all the microfunctions, aiming at structuring the discourse, ensuring clarity and affecting the organization of discourse, are analysed in three generations of Italian migrants living in Munich. The research aims to explore how the use of DMs in terms of their functional space varies across generations.

Some scholars maintain that in language contact the variation in the use of DMs could be correlated to some social factors (generation, education, Clyne 2003). In particular, metadiscursive DMs are influenced by the dominant language (Fiorentini 2016, Scaglione 2003) and therefore they may undergo a process of fusion (see Matras 1998: 298) and loss of functional space in L1.

Following Bazzanella (2006) the microfunctions taken into account are:

- demarcatives (*comunque* 'anyway')
- focalizers (*proprio* 'really', 'quite', 'exactly', *appunto* 'indeed');
- reformulators (*volevo dire* 'I meant', *cioè* 'in other words').

Data are taken from a corpus of about 13 hours of audio recordings with 32 southern Italian migrants living in Munich with different socioeconomic and cultural background: 15 for the I generation, aged between sixty and eighty, 8 for the II generation, aged between thirty and fifty, and 9 for the III one, aged between eight and thirteen.

Data are investigated using an onomasiological approach looking at the functions DMs entail in conversation.

Results point out that the functional space of DMs is gradually lost in the first generation while in the second and the third generation is partly stable and partly replaced by the German DMs. In the following example the DM “cioè” is not used with its typical explanatory and reformulation functions but rather as a filler: *Sono emigrato cioè perché ero ancora minorenne e mi ha accompagnato* (“I migrated well because I was still a minor and he came with me”).

From the second generation onwards, the functions of DMs are maintained, while in the third generation, German DM ‘also’ covers the explanatory function of ‘cioè’ as in the example “I: *Ma non è più bello Monaco?* LV: *No. Non c’è il mare. (...) non c’è questo also quando- qua sempre- piove a- in Italia se- c’è sempre il sole* (I: “But isn’t Munich more beautiful? LV: No, there is no sea (...) there is not this, *in other words*, here always rains in Italy there is always the sun”).

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## Exploring the development of written syntactic complexity in L2 Greek: The case of Spanish and Catalan L1 learners

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Keywords: L2 writing development, linguistic complexity, syntactic complexity, complexity – accuracy – fluency

The development of written competence in a second language (L2) has always received important attention in the field of Second Language Acquisition (SLA) (Manchón, 2009, and Polio 2017). Empirical research has shown that written performance, as a more cognitively demanding task, is directly related to L2 development and language learning (Manchón & Cerezo, 2018). A primordial measure of written production is that of syntactic complexity (Housen & Kuiken, 2009) which has been the focus of several studies (Wolfe-Quintero, Inagaki & Kim, 1998, and Ortega 2003). Despite

the significant amount of research dealing with popular L2s such as English, there are very few studies focusing on less examined target languages such as Greek (Kantzou, 2019).

Therefore, the aim of the current longitudinal study is to explore development of L2 written syntactic complexity during the acquisition of Greek as an L2 by Spanish and Catalan first language (L1) learners. Participants (n=82) were studying the target language in a formal language context in Barcelona, Spain and they belonged to different proficiency levels (from beginner to advanced). A timed written production task was used. A questionnaire was also administered in order to elicit information on participants' background. The study adopts a pre/post-test design, with data collection taking place in two different times: at the beginning and at the end of the course.

The data corpus consisted of 164 written productions which were transcribed, coded and analyzed in terms of different syntactic complexity measures. More specifically, an overall measure of syntactic complexity was calculated through the mean length of sentences, clauses and T-Unit (Hunt, 1965). Coordination and subordination of written production were also calculated through different measures of syntactic complexity (T-Unit/ Sentences, Dependent Clauses/T-Unit).

Results showed differences between the pre- and the post-test, which suggested a development of L2 written syntactic complexity as a result of instruction. However, such development was also affected by participants' level of proficiency. The study concludes by discussing some pedagogical implications for L2 writing.

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## On independent pronouns in languages with pronominal affixes: Evidence from Abaza

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Keywords: Northwest Caucasian languages, Abaza, pronouns, pronominal affixes, referential tracking

Independent pronouns usually function as referential tracking devices (e.g., Kibrik 2011: 78). However, if a language possesses a system of pronominal affixes which are actively used for referential tracking, the function of independent pronouns in this language is less clear. In the present paper I analyze functions of independent pronouns in Abaza, a polysynthetic Northwest Caucasian language. A case of Abaza is particularly interesting because Abaza independent pronouns are obligatory doubled by pronominal affixes, and, in addition, independent pronouns and pronominal affixes distinguish exactly the same oppositions in terms of person, number and gender, so from this perspective independent pronouns seem indeed redundant. The empirical basis of my investigation is the Spoken Corpus of Abaza ([https://lingconlab.ru/spoken\\_abaza/](https://lingconlab.ru/spoken_abaza/)) consisting of spontaneous narratives recorded from native speakers of Abaza.

Analysis of referential choice in Abaza confirms that the most frequently employed strategy for referring to characters of the narrative is using pronominal affixes alone. This strategy is employed as long as the hearer can unambiguously define who (or what) the speaker is talking about. When it becomes impossible, a speaker adds an NP (normally in case of the 3rd person referent). Pronouns, in turn, seem to contribute to the system of referential tracking on other levels.

The Abaza demonstrative pronouns, which are frequently employed for 3rd person reference, are functionally similar to those demonstratives which are used “to establish major discourse participants in the universe of discourse” (Diessel 1999: 98). A typical context for the appearance of such demonstratives is after the first mention (1), see Lichtenberk (1996) on To’aba’ita and Himmelmann (1996: 229) on Tagalog.

- (1) *awat*                    *zəmʕʷa*                    *j-š'arda-čə-χa-t*                    *j-ʔa-ta-z*  
**DIST.PL**all                    3PL.ABS-many-EXC-INC-DCL                    3PL.ABS-REL.LOC-be.in-PST  
 [At that time, **people** who were in the world, gathered together, lived somewhere.] ‘**They** became too numerous where they lived.’

Personal pronouns have an intensifying function (2): they relate a referent to a set of alternatives (cf. König & Gast 2006: 226). An emphatic use of personal pronouns seems to be common for polysynthetic languages, see, e.g., Fortescue (2017: 220) on Inuit, Aikhenvald (1995: 192) on Baniwa.

- (2) *jə-r-ga-n*                    *jə-r-š'ə-n*  
 3N.ABS-3PL.ERG-take-PST.DCL                    3N.ABS-3PL.ERG-kill-PST.DCL  
*dara* *jə-r-fa-χ-d*  
**3PL**    3N.ABS-3PL.ERG-eat-RE-DCL  
 ‘[A bullock was born, and he was taken from us by contract.] **They** took it, stabbed it and ate it **themselves**.’

Finally, 1st and 2nd personal pronouns also mark a topic shift (3) (in case of 3rd person, NPs are used in this function).

- (3) *sar-g'əj*                    *sə-m-q'wə-χ-wa-ta*                    *saratav*  
**1SG-ADD**                    **1SG.ABS-NEG-be\_late-RE-IPF-ADV**                    Saratov  
*s-tə-çə-n*                    *maχač'kala*                    *s-ca-t*

1SG.ABS-LOC.ELAT-pass-PST Makhachkala 1SG.ABS-go-DCL

‘[Abdulgamid’s older brother got married and invited me to the wedding (in Daghestan).] (As for me,) I without stopping left Saratov for Makhachkala.’

Thus, Abaza independent pronouns attract the hearer’s attention to a new referent, interact with scales and highlight contrastive topics. This set of functions resembles behaviour of discourse (focus-sensitive) particles (Forker 2016), which might indicate that independent pronouns in languages with pronominal affixes are functionally similar to this class of linguistic expressions.

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## Degree constructions in Seri (sei, isolate, Mexico)

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Keywords: degree, gradable predicates, comparison, Seri,

In this paper, we describe Seri degree constructions and compare them on a number of properties to similar constructions in other languages. Our work shows that Seri does not behave in a homogeneous way with respect to diagnostics proposed to analyze gradable predicates (e.g. Beck et al. 2009).

Concepts expressed by adjectives in languages like English correspond to intransitive stative predicates in Seri (as in Washo; Bochnak 2015). These predicates appear as relative clauses on the nouns they modify. Note that eight underived adjectives in Seri do not correspond to the property concepts – e.g. dimension, physical properties, color – commonly associated with the adjective category cross-linguistically according to Dixon (1982).

- (1) Juan quih yoocösxaj.  
Juan DEF RLYO.long  
Juan is tall.

Seri does not have comparative marking on the stative intransitive predicate, comparatives are marked

by the expression *iiqui cöihiin hac* ‘with respect to’ introducing the standard to the simple positive sentence (1), as in (2).

- (2) Context: Juan is 1.95m and his brother Oscar is 1.94m.  
 Juan quih yoocösxaj, [ Oscar quih iiqui cöihiin hac ]  
 Juan DEF RLYO.long Oscar DEF 3POSS:towards 3IO:3POSS:OBL.NMLZ:touch  
 DEF.LOC  
 Juan is taller than Oscar (lit. Juan is tall, with respect to Oscar).

The preceding example shows that the Seri comparative allows crisp judgments, as the difference between 1.95m and 1.94m is small. The standard-marking expression shows person agreement with both the standard and the associate in the main clause (cf 2 and 3).

- (3) He hypoocösxaj (me) iiqui me-h-ihiiin hac.  
 1SG 1SG.INTR:RLYO.long 2 3POSS:towards 2IO-1POSS-OBL.NMLZ.touch DEF.LOC  
 I am taller than you.

Like Washo (Bochnak 2015), Warlpiri (Bowler 2016), Motu (Beck et al 2009), Nez Perce (Deal & Hohaus 2019), Seri only has implicit comparatives in the sense of Kennedy 2007 (i.e. no comparative marker on the gradable predicate). But whereas Washo and Warlpiri do not have any comparative marker (they juxtapose clauses with opposite polarity), Nez Perce and Seri do: they mark the standard of comparison overtly. Like Warlpiri and Nez Perce but unlike Washo, Seri allows crisp judgments, which is taken not to be predicted to be the case for a language with implicit comparatives according to e.g. Kennedy 2007, Bochnak 2015.

As pointed out in Deal and Hohaus 2019, the correlation between the type of comparative in a language and the representation of gradable predicates is not one-to-one but influenced by other factors such as the type of comparative marker and the lexical availability of degree-wh-words. Indeed, as figure 1 illustrates, ‘implicit comparatives’ in the sense of Kennedy (2007) does not pick out a natural class. Current available tests in the literature – supposed to tell us whether a language has degrees or not, which in turn should explain what comparative strategy the language uses – do not correlate with particular morpho-syntactic strategies. Degree constructions in Seri further motivate the need for more precise definitions and tests.

Figure 1: Properties of degree constructions in languages with only ‘implicit’ (Kennedy 2007) comparatives

	No marker		Standard marker	
	Washo	Warlpiri	Nez Perce	Seri
Comp. differential	-	-	-	-
Measure phrase	-	-	-	+
Comp. with degree	?	-	-	+(dem)/-(meas)
Degree question	-	-	-	+
Subcomparative	?	-	-	+
Crisp judgment	-	+	+	+

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## **Motion events in Spanish from a multimodal perspective: What gesture reveals about non-easily encodable semantic components and its congruency**

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Keywords: Multimodality, Gesture, Motion, Spanish, Semantic congruency

The expression of path and manner of motion vary cross-linguistically (Talmy 1991, Slobin 1996, among many others). Previous studies have addressed this topic from a multimodal perspective, showing that language specificity in motion event encoding has a reflect on co-speech iconic gestures (Kita & Özyürek 2003; McNeill 2000, 2009; Özyürek *et al.* 2008). These studies also suggest that some relevant information of how motion is internally processed might be neglected in speech analysis, since gesture can convey meanings that are not linguistically expressed (e.g. in verb-framed languages such as Spanish, gesture typically conveys manner information which is not lexicalized in speech: the presence of *manner fogs* is well-acknowledged).

This study focuses on how Manner of motion is processed, as compared to Path, in a verb-framed language (Spanish) and from a multimodal perspective (considering both speech and co-speech gesture). The main goal will be to explore to what extent and in which cases gesture can significantly add information about a motion component and whether this information is congruent with that encoded in speech. Accordingly, we analyze quantitative and qualitative differences on the encoding of both Manner and Path of motion. We expect to find Path information equally encoded in the speech and the gesture modalities, but more Manner information in gesture than speech, especially for those cases that are not readily accessible for speakers in their language (Kita 2000).

Twelve adult native speakers of European Spanish participated in this study. Data were elicited with the *Tomato Man* stimuli (Özyürek, Kita & Allen 2001) and coded following Kita and Özyürek's (2003) procedure. In total, 178 clip descriptions were transcribed with ELAN (Lausberg & Sloetjes 2009).

Results show that speakers consistently gesture about both Manner and Path, and that, as expected, gesture offers information not verbally-coded, especially in the case of Manner. As far as the type of Manner and Path information is concerned, results reveal that Spanish speakers have difficulties when describing rotating motion (*spin* vs. *roll*). Spanish has a readily accessible verb to lexicalize rotation on the X-Axis (*rodar* 'roll') but lacks a specific one to lexicalize rotation on the Y-Axis: to convey the idea of *spin*, the trend is to combine *rotar* 'rotate' with *sobre sí mismo* 'around himself', which entails a higher cognitive load for speakers. Differences between speech and gesture were particularly relevant in these cases when the manner conveyed is not easily encodable: while no

distinction of axes arise in speech, speakers reproduced the prompted rotation in gesture. Regarding the degree of semantic congruency in the Path and Manner information encoded both in speech and gesture, two general trends arise: (i) gesture expands the meaning conveyed in speech by encoding the alternative component (i.e. both Path-only and Manner-only verbs tend to synchronize with gestures combining Path and Manner), (ii) while gesture tends to reproduce the Manner information encoded in Manner verbs (total congruency), gesture tends to partially modify information encoded in Path verbs by adding extra details of trajectory.

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## **Future anterior in Ruthenian as a key to understanding its evolution in East Slavic**

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Keywords: future anterior, suspended assertion, dubitative, Ruthenian, Slavic languages

In recent years, the category of perfect and the perfect paradigm in Slavic (pluperfect and future anterior) have drawn significant attention. It caused subsequent revisions in the corresponding field (cf. Sičinava 2013; Plungian 2016, Plungian, Urmančieva 2017, 2018, 2019). A separate study of the future anterior (below — FA) in Slavic and some other European languages allowed tracing its areal features and grammaticalization paths. However, from the diachronic perspective, the Slavic FA remains underexplored. While the FA in Old and Middle Russian has been studied in detail (Andersen

2006, 2006a), the FA in Ruthenian has never been among constructions believed to deserve a particular interest. Henceforth we refer as Ruthenian to the written language of the Grand Duchy of Lithuania; it should not be confused with the modern East Slavic lect.

The present paper focuses on the semantics and distribution of the FA in the 15th–16th-century document language of the Grand Duchy of Lithuania. The FA in Ruthenian is a construction that comprises a present perfective form of the auxiliary ‘be’ and an *l*-participle. The examined Ruthenian charters evidence for a cross-linguistically unique development of the FA.

The present study is carried out on data from more than 900 charters and the Lithuanian Statute from 1588. It allowed collecting a corpus of 212 contexts. All the contexts were tagged for the following properties:

- date of occurrence,
- the aspect of the *l*-participle (perfective or imperfective),
- reference type of the construction (the East Slavic FA could refer to the future, but more frequently referred to the past),
- type of the clause (conditional, correlative, direct or indirect question, main clause),
- semantic type, aspectual, or modal (experiencer, iterative, habitual, the multiplicity of objects, epistemic, dubitative).

The study allows to claim that the FA was licensed in Ruthenian by a hierarchy of rules: primarily, the markers of suspended assertion presented in the context (conditional, indirect question, propositional predicate), i.e.:

(1) *ja dej togo ničogo ne vėdaju, kakŭ mužŭ moj **budet**<sup>be.AUX.FUT.3SG</sup> brata svoego **zabil**<sup>beat.PTCP</sup>* ‘I say I do not know anything about how my husband **has beaten** his brother to death.’

In most other cases, it is powered by contexts lacking a temporal localization (iterative, habitual, or experiencer meanings, cf. (2)), or by the multiplicity of the objects:

(2) *derevo... brati... v našych selech i v borech, gde zdavna **birali**<sup>take.HAB.PTCP</sup> **budut**<sup>be.AUX.FUT.3PL</sup>* ‘[it is allowed] to take wood in our villages and in the forests, where [they] **have been taking** for a long time.’

Sporadically, the use of the future anterior can be explained exclusively by syntactic rules, i. e., by a particular type of a subordinate clause (conditional or correlative). In this respect, the Ruthenian FA is similar to the French or Latin subjunctive mood at their advanced grammaticalization stages.

The FA in official Ruthenian might undergo pragmaticalization, i.e., acquire the ability to mark an indirect speech act of disproof. Thus, Ruthenian can be considered a unique language compared to both Slavic and SAE in that it features a widely used dubitative FA.

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**Prosody of emotions.  
The relation between (prosodical) linguistic and affective functions of nonmanual components in Italian Sign Language**

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Keywords: special questions, syntax/pragmatics interface, prosody, sign language, gesture

1. Introduction and state of the art

Prosody in sign language works exactly in the same way as it works in spoken language. This is conveyed by nonmanual components, though: facial expressions parallel spoken language intonation (Sandler & Lillo-Martin 2006). Moreover, as in spoken communication, the face also conveys paralinguistic meanings such as affect in communication among signers (Campbell, Woll, Benson & Wallace 1999; McCullough, Emmorey & Sereno 2005). The face can carry both linguistic and paralinguistic information. However, it has always been argued that these elements are distinct in their formal properties such as scope, onset, and apex (Corina, Bellugi, & Reilly 1999): (i) while linguistic facial signals are hypothesized to align with phrasal boundaries within the signed sentence, affective facial signals may spread over longer periods of conversation and not line up strictly with phrasal boundaries, (ii) the onset and offset of affective expressions are more gradual compared to the abrupt appearance changes in a linguistic facial expression, (iii) with linguistic nonmanual components the intensity of the facial expression rises suddenly to its peak and stays constant before again going down abruptly. Affective facial expressions on the other hand would have less constant apexes, and their intensity varies over time.

2. Hypothesis

In this paper, I present the results of a pilot experiment on the realization of surprise and surprise-disapproval questions (Giorgi 2018; Giorgi and Dal Farra 2019) in Italian Sign Language (LIS). I run an elicitation and a repetition task based on Giorgi and Dal Farra (2019). I annotated with ELAN the nonmanual components signers-participants spontaneously associate with yes-no and wh-questions expressing surprise and surprise-disapproval. This comparison is crucial in that (in many sign languages including LIS) yes-no questions are prosodically marked by raised eyebrows, whereas content questions are typically associated with furrowed eyebrows. Simultaneously, the expression of surprise and disapproval are typically associated with raised and furrowed eyebrows, respectively (Ekman 1999), as well. I found that what is usually assumed on the formal differences existing between linguistic and affective functions on sign languages is not supported by the data. It should not be surprising, though. The only known study which systematically tested these assumptions for any signed language is Baker-Shenk (1983). In fact, some of the hypothesized differences in form between the linguistic and the affective use of facial expressions are not supported by her findings for

American Sign Language. Specifically, the nonmanual linguistic signal in her data was generally at apex level before the initiation of the first manual sign in the sentence (Baker-Shenk, 1983:267). Moreover, she found that the intensity levels of the specific kinds of facial expressions associated with surprise (raised eyebrows) are higher in polar questions that express surprise than in the neutral cases. The same phenomena are reported by De Vos et al. 's (2009) study on surprise questions in Dutch Sign Language (NGT). My results on LIS are coherent with these data and allow me to hypothesize that linguistic and affective functions of nonmanual components in LIS can influence each other, at least in the case of the linguistic expression of surprise and disapproval.

### 3. Conclusions

The expression of affect may override the linguistic signal in Italian Sign Language resulting in a peculiar emotional prosody.

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## **Variation and change in the expression and functions of the first-person singular in six European newspapers, from 1960 to 2010**

Pekka Posio & Riie Heikkilä

An oft-repeated claim in studies focusing on language use in the media is that there is a general trend towards more subjective writing styles, reflected in the increasing frequency of references to the writer and “writing in the first person” (Coward 2013) as opposed to a the traditional objectivity norm (Schudson 2001). However, such claims have not been backed up by quantitative results from diachronic data. In addition, it is unclear whether the purported increase in the textual frequency of first-person singulars correlates with “subjectivity” (e.g., Langacker 2002), given that this grammatical person is related with several functions like the expression of epistemicity and evidentiality, although to a different degree in different languages (cf. Mullan & Karlsson 2012).

This paper takes a look at the variation and change in the use of first-person singulars in newspaper texts. Our data consist of a randomized sample of 11,775 articles published in the culture sections of six European quality newspapers *The Guardian* (UK), *Dagens Nyheter* (Sweden), *Helsingin Sanomat* (Finland), *ABC/El País* (Spain) and *Le Monde* (France) between 1960 and 2010. The focus of our analysis is the use of the first-person singular in the newspaper articles. We analyse (1) how its frequency changes over time and between different newspapers, (2) what type of texts and topics are the ones that most favour its use, (3) what kind of writers use it the most (e.g., men vs. women, journalists vs. external invited writers) and (4) what textual functions does the use of this grammatical person have in the articles. Our analysis is based on logistic regression modelling of the totality of the articles of our corpus (N = 11,775) and the subset of articles where the first-person singular is used at least once (N = 1,077). In addition, the 4,689 occurrences of first-person singular verbs and pronouns were analysed qualitatively to determine what functions this grammatical person serves in the texts. We label the functions emerging from the data as evaluative, epistemic, narrative and metatextual.

Although both the rise of “subjectivity” and the use of first-person singulars in journalism has been attributed to an increase in the number of female writers (Coward 2013), we found neither a linear increase in women among the writers nor a correlation between first-person singular use and writer gender, except in the Spanish newspapers where male writers use first-person singulars significantly more than females. Only *The Guardian* and *Dagens Nyheter* show an increasing trend in the frequency of first-person singulars over time. While the newspapers show divergent quantitative trends, the qualitative analyses reveal what they all have in common: the first-person singulars are increasingly used in narrative sequences where the writer takes the role of the protagonist, while the evaluative uses that were prevalent in the early decades become less and less frequent. We argue that

while this general trend reflects changes in (cultural) journalism (cf. Wahl-Jorgensen 2013), the differences between the journals reveal are related with cultural and pragmatic constraints affecting the expression of self-reference in journalistic writing.

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## Impersonalization in Romanian versus English

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Keywords: acceptability, impersonal pronoun, passive, Romanian, semantic map

Impersonalization, which Gast & van der Auwera (2013:124) characterize as “filling an argument position of a predicate with a variable ranging over sets of human participants without establishing a referential link to any entity from the universe of discourse”, has attracted considerable interest the last fifteen years. Much has been written especially about impersonal pronouns, in Germanic (e.g. Jensen & Gregersen 2016, Fenger 2018) and Romance (e.g. Creissels 2008, Fernández 2013). Romanian seems to have escaped notice, however. We seek to fill this gap through a comparison with the better-documented language of English (e.g. Rudolf 2016, Haas 2018).

Adopting an acceptability judgment approach, with data from 60 speakers per language, we describe the functional potential of *one*, ‘you’ and ‘they’ as well as the generally lesser-studied passive in twelve distinct impersonal contexts. These exhibit a fundamental dichotomy between “universal” and “existential” cases –paraphrasable as ‘anyone’, in (1), versus ‘someone/some people’, in (2)– and more fine-grained distinctions from Siewierska & Papastathi’s (2011) and Gast & van der Auwera’s (2013) semantic maps.

- (1) a. *Ai*                      *doar o*                      *viață*.  
have.2SG.PRS    just    INDF.F.SG                      life  
‘You only live once.’
- b. **One** can’t learn a language in two weeks.
- (2) a. **They**’re simultaneously knocking on the front and back doors. [‘some people’]
- b. *Radio-ul*                      *a*                      *fost*                      *furat!*  
radio-DEF.SG.M                      have.3SG.PRS                      be.PST.PTCP                      steal.PST.PTCP  
‘The radio’s been taken!’ [‘someone/some people’]

They divide the existential domain differently, though. Siewierska & Papastathi (2011) distinguish

uses based on identifiability type/level: (2a), set in the speaker's here-and-now, would be "specific" and (2b) "vague". Gast & van der Auwera's (2013) distinction is number-based: (2a) is plural and (2b) number-neutral. By combining the dimensions in stimuli (e.g. contrasting 2a to specific-number-neutral *they're knocking on the door*), we test a recent proposal that identifiability and number actually interact in 'they', with decreasing acceptability for contexts further removed from its definite plural personal pronoun prototype. Another suggestion that Romanian-English allows us to check –by Siewierska & Papastathi (2011) and inspired by the link between formal reduction and desemanticization– is that pro-dropped 'they' is more compatible with such less definite/plural uses than overt 'they'.

Our results show that Romanian pro-dropped 'they' is indeed more acceptable in less definite/plural uses than English 'they', thus corroborating the hypothesis. They also reveal that, in both languages, the 3PL's acceptability is affected by identifiability *and* number, offering support for a combined semantic map of impersonalization. Other findings include: (i) Romanian displays the same distribution of labor as English roughly between universal 'you' and existential 'they'; (ii) in universal contexts, pronouns are generally preferred to passives, confirming Sansò's (2006) results for other languages; (iii) in existential uses, English –unlike Romanian– favors passives to pronouns, particularly when referents are entirely unidentifiable or likely singular; (iv) in "speech-act-verb" contexts ('they say/it is said that'), English prefers 'they' to the passive –pace Siewierska (2008)– while Romanian tolerates neither option (cf. Manea 2012), strengthening an earlier argument that this use occupies a special position on the map and suggesting that future research should consider the reflexive impersonal.

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## On the development of the particles formed with the Italian adverb *pur(e)*

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Keywords: Italian, connectives, semantic change, diachrony, corpus linguistics

In Old Italian the adverb *pur(e)* (stemming from the Latin *pūrē* ‘purely’) displays the following functions: a) non-scalar exclusive adverb and scalar exclusive adverb (‘only’); b) adversative connective (‘but, however’); c) identifier (‘precisely, exactly’) (D’Achille/Proietti 2016). In Modern Italian the adverb acquires d) the additive value (‘also’) (cf. Ricca (2017) for the hypotheses about its development). Among the functions listed so far only those in b) and d) are attested in Present-day Italian.

In contemporary Italian *pur(e)* appears in several particles: *eppur(e)* ‘but’ (1.), *oppur(e)* ‘or’ (2.) (Manzotti 1999), *neppur(e)* ‘neither/not even’ (3.) (Tovena 2005), *se pur(e)*, introducing conditional concessives (4.) and factual concessives (5.) (cf. Moretti (1983), Elgenius (1991), Mazzoleni (1991)) and *purché* ‘provided that, as long as’ (6.) (Visconti 2000). Such particles have exclusively been investigated in a synchronic perspective in the literature; here some examples:

1. Sapeva di commettere un errore, *eppure* lo ha fatto.  
‘He knew he was wrong, *but* he did it.’
2. Vai in ufficio in macchina *oppure* a piedi?  
‘Do you drive to the office *or* do you go on foot?’
3. Non ha mangiato la verdura e *neppure* la frutta.  
‘He ate neither vegetables nor fruit.’ (lit. ‘He did not eat vegetables, and *not also* fruit.’)
4. *Se pure* avessi studiato, non avrei superato l’esame.  
‘*Even if* I had studied, I would not have passed the exam.’
5. *Se pure* si tratta di una situazione difficile, non possiamo intervenire.  
‘*Although* it is a tough situation, we cannot intervene.’
6. Lo perdonerò *purché* mi chieda scusa.  
‘I will forgive him *as long as* he apologizes to me.’

My work aims to analyse the diachronic path leading to the development of the forms mentioned above through the investigation of diachronic corpora (OVI, MIDIA).

The diachronic survey shed light on the following issues:

- Which were the contexts that favoured the development of *eppur(e)*, *oppur(e)*, *neppur(e)*, *se pur(e)*, *purché*?
- When did the forms under investigation emerge? In other words, when did the sequences connective (*e* ‘and’, *o* ‘or’, *né* ‘and not’, *se* ‘if’) + *pur(e)* and *pur(e)* + the complementizer *che* constitute integrated combinations? Moreover, when did the univerbating processes take place?

Consider, for example, the case of *neppur(e)*; on the basis of the diachronic data, I hypothesize that the Old Italian negative contexts *né X, né pur(e) Y* ‘not X, and not only/simply Y’ in which *pur(e)* conveys a scalar exclusive meaning played a crucial role for the reanalysis of the adverb as additive, and thus for the development of the additive negative *neppur(e)*. In other words, these contexts triggered the process of semantic change leading *pur(e)* to assume the new meaning diametrically opposed to the original one. As I will show with regard to the other linguistic expressions formed with *pur(e)*, it does not always happen that *pur(e)* loses its original meaning; in fact, a) it maintains the adversative meaning in *eppure* and the restrictive one in *purché*; b) it leaves a trace of its adversative meaning in *se pure*.

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### Corpora

MIDIA= Morfologia dell’Italiano in Diacronia, <http://www.corpusmidia.unito.it/>

OVI = Opera del Vocabolario Italiano, <http://gattoweb.ovi.cnr.it/>

## Variation in binding patterns

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Keywords: binding, cross-linguistic variation, Indo-European, coargument vs. possessive, multiple agree

I analyze a pattern of variation among the anaphoric systems of Indo-European languages (I highlight only a few):

### I. Local binding in the coargument domain



(1) ..... [DP ... [PossP... [Poss' [H<sup>0</sup><sub>Poss</sub> φ ] ] ] [ n [N... ] ] ]

*Uniformly anaphoric*: No additional intervener on the path between φ and Person and # probes on the spine of the verbal projection → φ is valued for P or #.

*Uniformly pronominal*: Inspired by Despic (2015)/Reuland (2011): H<sup>0</sup> marks definiteness and bears Person and # → φ is inaccessible for the probes on the spine of the verbal projection due to minimality.

*Mixed*: Subcase of *Uniformly anaphoric* - P and # form a complex feature in 1<sup>st</sup> and 2<sup>nd</sup> person.

Prediction:

(2) If a language has the *mixed poss anaphor* pattern it also has the mixed pattern in the argument domain.

Time permitting I will show why Russian (and other Slavic languages) optionally allow 1<sup>st</sup> and 2<sup>nd</sup> person pronouns in possessives but not in the argument domain.

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## Functional Competition and Complementation among Multiple Forms: The Case of Layered Korean Datives

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Keywords: Grammaticalization, Korean, Dative, Specialization, Intersubjectification

Even a cursory look at synonyms in language reveals that language does not seem to favor an isomorphism of ‘one form - one meaning’. Language is indeed replete with synonyms, and yet (near-)synonymous forms arise despite the pre-existing forms for a particular function. This is particularly true with grammatical forms that emerge constantly resulting in multiple layers. However, these multiple forms, which, figuratively speaking, acutely compete for survival and primacy in the same function, may strike a peace deal among them through an elegant division of labor. This is well

illustrated in dative-marking in Korean, for which a handful of forms each with different historical depth, synchronically co-exist. The datives are partially listed with their semantic features and their grammaticalization sources, in (1):

- (1)
- |                  |                                       |                                |
|------------------|---------------------------------------|--------------------------------|
| a. -ey           | [-animate], [+spatial]                | << unclear, possibly ‘middle’) |
| b. -eykey        | [+animate], [-honorific]              | << ‘at the place’              |
| c. -hanthey      | [+human], [+colloquial]               | << ‘one place’                 |
| d. -kkey         | [+human], [+honorific]                | << ‘that place’                |
| e. -hantheytaka  | [+human], [-honorific]                | << ‘drawing near one place’    |
| f. -hantheytayko | [+human], [-honorific], [+pejorative] | << ‘touching one place’        |
| g. -eytaka       | [-animate], [+spatial]                | << ‘drawing near to’           |
| h. -tele         | [+human], [+colloquial]               | << ‘accompanying’              |
| i. -poko         | [+human], [+colloquial]               | << ‘seeing’                    |
| j. -eytayko      | [+spatial]                            | << ‘touching’                  |
| k. -eytakatayko  | [-honorific], [+pejorative]           | << ‘drawing near and touching’ |

The functional differentiation indicated in (1) is a schematic generalization glossing over an enormous amount of subtleties. This generalization, however, suggests that linguistic forms in a single functional domain may carry differential specialization through semantic and/or stylistic variation. Notable observations are (i) that the lexemes denoting spatiality, e.g. ‘place’, and coexistence/contiguity/proximity, e.g. ‘accompany’, ‘draw near’, ‘touch’, etc., are favored sources of grammaticalization; (ii) that the distal demonstrative ‘that’ is recruited to encode honorification, a metaphorical representation of spatial distance onto psychological distance; (iii) that physical touch, e.g. ‘touch’, is associated with imprudence, thus pejorative; and (iv) that functional subcategorization is fine-grained. This state of affairs strongly suggest that grammatical functions are closely tied to the semantics of the source lexemes (‘the source determination hypothesis’; Bybee et al. 1994), that grammatical meanings tend to be more (inter-)subjectified than the source meanings (‘(inter-)subjectification’; Traugott 1982), and further that even grammatical notions can be deeply intertwined with cultural characteristics of the speech community (Koo & Rhee 2016).

Drawing upon historical and contemporary corpora, this paper analyzes the diachronic interactions of linguistic forms and dynamic reorganization of linguistic paradigms in the light of grammaticalization principles and mechanisms, as well as the synchronic functional distribution in the modern times.

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## Quantifying changes in gender bias in the Google Books Corpus

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Keywords: Gender Studies, Language Change, Corpus Linguistics, Sexism in Language

It is well established that language use in most contemporary western societies is gender biased (Lakoff 1973; Henley 1987; Cameron 1998; Romaine 1999). Recently, this socio-linguistic issue of salient concern has come to be increasingly approached with corpus linguistic methods. (Baker 2010; Baker 2013; Baker 2014; Baker 2015; Caldas-Coulthard, Moon 2010; Konnelly 2020; Norberg 2012; Norberg 2016; Pearce 2008). However, diachronic studies of gender bias in language use are still relatively rare (but see Baker 2014), and most studies work by way of example, focussing on specific exponents of gender bias (such as collocates of words such as *man*, *woman*, *boy*, *girl*, etc., e.g. (Caldas-Coulthard, Moon 2010; Norberg 2016).

In our paper we describe what we consider a promising method for assessing and quantifying the over-all gender bias reflected in different periods in the development of American English during the last two centuries. Essentially, we extract samples of constructions involving the pronouns *he* and *she* and their inflected forms from the (diachronically layered) *Google Books Corpus*, and measure differences between the collocational patterns each of the two is involved in. Specifically, we proceed as follows: first, we choose constructions such as, for instance [*he* or *she* + VERB] and extract the frequencies of the two subtypes for each decade. Then, we choose a specific verb, such as *work*, and extract the frequencies for *he* [*work*] and *she* [*work*] for each decade as well. Next, we calculate the percentage of verbs following *he* that are forms of the verb *work*, repeat the same for *she*, and divide the former percentage by the latter. This gives us a measure (similar to the odds ratio) that we interpret as the gender bias of the verb *work* (values above 1 reflect a male bias, values below 1 a female one). It allows us to chart a diachronic trajectory of gender bias as in figure 1 below.

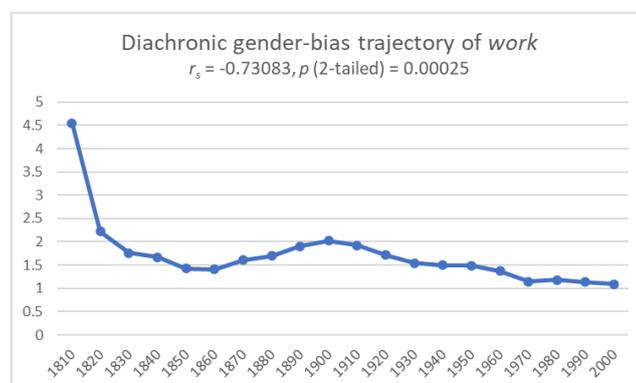


Figure 1

Next, we repeat the procedure for a pseudo-random sample of other verbs and calculate the trajectory of the mean gender bias of the [*he/she* + VERB] construction (as in figure 2). A pilot involving 20 verbs reassuringly suggests a significant decrease in bias over the last 200 years.

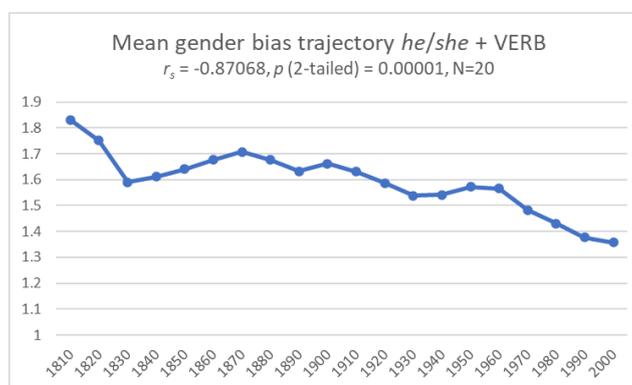


Figure 2

Finally, we calculate how gender bias correlates with frequency, as gender bias may change by changes in the frequency of words whose bias itself remains unchanged.

We present results not only for the [*he/she* + VERB] construction, but for a variety of others, such [VERB + *him/her*] as in *saw her*, [*he/she* + BE + ADJ] as in *she was alive*, [*he/she* + BE + PPP] as in *he was heard*. Also, we discuss differences between the trajectories of different subtypes of the constructions (e.g. verbs indexing psychological processes vs. verbs indexing actions).

Generally, our exploratory study intends to put our proposed method up for criticism, and to discuss what questions it may help to answer and what others it raises (we expect there to be some).

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## Language contact and substrate language effect in Asian varieties of English

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Keywords: Asian varieties of English, World Englishes, complementation, language contact, substrate language

Post-colonial Englishes emerged in language contact situations in which British settlers spoke English and the native population spoke one or more other languages. The local languages spoken by the indigenous populations have often had an impact on the English spoken in the different regions (Thomason 2001, Schneider 2007, Mufwene 2008). The influence of substrate languages has been researched widely in the fields of lexicon and phonology (see, for example, Wiltshire 2005) but remains underexplored in terms of lexico-grammatical phenomena like verbal complementation. The present paper explores the potential effect of substrate languages on the non-categorical variability attested in clausal verb complementation, in particular the variation between finite *that*-clauses and nonfinite *-ing* participle clauses after the retrospective verb REGRET (*he regrets that he risked his health* vs. *he regrets risking his health*). The analysis includes seven Asian varieties of English (Indian, Sri Lankan, Pakistani, Bangladeshi, Singaporean, Malaysian, and Hong Kong Englishes) with comparisons to British English.

The *Corpus of Global Web-Based English* (GloWbE) yields 2,192 examples of the variability illustrated above, after manual pruning. Results indicate that five of the seven Asian varieties show a preference for finite *that*-clauses as compared to British English (India, Bangladesh, Hong Kong, Sri Lanka, and Pakistan). The other two varieties (Singapore and Malaysia) show a similar distribution to that of British English, with a clearly stronger preference for nonfinite *-ing* participle clauses. These results were analyzed against the backdrop of the clausal complementation profiles of the main substrate languages (23 languages, among them Hindi, Bengali, Telugu, Tamil, Sinhala, and Sindhi). The differences observed in the complementation profile of REGRET in the Asian varieties of English examined, however, do not seem to be explained by the complementation systems in their respective substrate languages. For example, varieties with different complementation systems in their substrate languages, such as Indian English, with both finite and nonfinite complementation patterns in its various substrates, and Bangladeshi English, with finite patterns only, show a reasonably similar distribution (around 40% finite *that*-clauses vs. 60% nonfinite *-ing* participle clauses). At the same time, varieties with similar complementation systems in their substrates, like Malaysian and Bangladeshi Englishes, display radically different tendencies in the GloWbE data. The overall preliminary conclusion is that the complementation systems of the substrate languages do not seem to be predictors of the distributions found in World Englishes, which runs counter to evidence suggesting opposite effects in other areas of linguistic analysis.

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## Back in the future: tracing the etymology of West Polesian future tense grams

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Keywords: de-obligative; de-volitive; future tense; typology; West Polesian

Data from my own fieldwork in Belarus (Roncero 2019) show that West Polesian (East Slavic) has multiple future tense constructions or grams. In fact, some of these constructions adjust to at least six of the ‘future gram families’ proposed by Dahl (2000): the synthetic future tense (1); the de-obligative (2); the de-volitive (3); the de-venitive (4); the copular future (5); and the Slavic perfective present (6). On the one hand, this should not be surprising as, according to the cross-linguistic surveys in Bybee (1985) and Ultan (1978), future tense grams are reformed frequently. On the other hand, no European language appears to have more than three grams for the future tense in Dahl’s (2000) survey, and certainly not in the Slavic family.

In this paper I assess these constructions from historical and typological perspectives, focusing on the de-obligative and de-volitive future grams, which have had the rarest evolution in West Polesian. First, I show their cross-linguistic recurrence and extension in other European languages; I assess the differences and similarities between the forms and I try to place them on the map. Second, I focus on West Polesian de-volitive (*xotfu robitr* ‘I will need to do’) and the de-obligative (*majusj robitr* ‘I am planning to do’) futures. Against the typological expectations, the de-volitive has synchronically an obligational nuance, whereas the de-obligative expresses an intention. In the light of this data, I try to address two closely related questions:

- 1-Did the relocation or re-semantisations of these grams take place at the same time?
- 2- Is the re-semantisation of these grams a side-effect of having a particularly large inventory of grams (which could have pushed some to specialise)?

### Examples

(1) The inflectional imperfective future (Dahl 2000: 319):

ja	ʃ:jo	ni	<b>zna-ti-mu</b>	skaza-ti
1SG.NOM	Q.ACC	no	know-INF-HAVE.1SG	say-INF
‘I won’t be able to tell [it] (lit. I will not know to say).’				[Z10.1 00:20]

(2) The ‘have’ or de-obligative future (Dahl 2000: 323):

vona	<b>maj-it-sa</b>	<b>rodi-ti</b>	v	ijulj-e
3.SG.NOM.F	have-3SG-REFL	deliver-INF	in	July-LOC.SG
‘She is due to deliver in July.’				T12.8 EL 04:32]

(3) The de-volitive construction (Dahl 2000: 322-323)

vona            **xotf-e**            kot-a            **pokormi-ti**  
 3.SG.NOM.F    want-3SG        cat-ACC.SG    feed.PERF-INF  
 ‘She is going to feed the cat (lit. She’ll be in need to feed the cat).’    [Tor1.36 PR 01:51]

(4) The ‘become’-type or de-venitive future (Dahl 2000: 322-324):

jek    vona            **stan-e**            [xoroʃo]            **ɦutʃi-ti-sja**  
 COND 3SG.NOM.F    become.PRF-3SGwell            study-INF-REFL  
 to    jʃi            dad-utj            premij-u  
 then    DAT.SG.F        give.PRF-3PL    prize-ACC.SG  
 ‘If/when she will start to study hard, she will get a prize.’    [Tor1.53 EL 03:28]

(5) The Slavic perfective present (Dahl 2000: 323, 326):

batju[k-a,        jak    zeʒ    ja,[...]        **sober-u**        ɦet-ije        ɸiri-je?  
 father-VOC.SG    how    then    1SG.NOM        gather-FUT.1SG    this-ACC.PL    feather-ACC.PL  
 ‘Father (Orthodox priest), how will I gather all those feathers?’    [Z2.6 03:07]

(6) The Slavic copular construction (Dahl 2000: 324):

ʃ:jo    mi        **bud-em**        **robi-ti**    na    Pask-u?        **bud-em**        **praznova-ti**  
 Q.ACC 1PL    be.FUT-1PL    do-INF in    Easter-LOC.SG    be.FUT-1PL    celebrate-INF  
 ‘What are we going to do in Easter? We are going to celebrate it.’    [P2.5 PR 00:04]

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## Eventualities within the nominal domain: The case of <no + event deverbal nominal> in Spanish

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Keywords: deverbal nominalizations, negation, eventualities, lexical aspect, Spanish

This paper studies how negation interacts with event deverbal nominals in Spanish. It shows that constructions such as (1) share properties both with events and states. Among the eventive properties, we find the compatibility with the predicate *tener lugar* ('to take place') and with perception verbs (2).

(1) La no verificación de los datos por parte del científico.  
 the no verification of the data by part of the scientist  
 'The non-verification of the data by the scientist.'

(2) a. La no verificación de los datos tuvo lugar ayer.  
 the no verification of the data took place yesterday  
 'The non-verification of the data took place yesterday.'

b. Presenciaron la no verificación de los datos.  
 witnessed the no verification of the data  
 'They witnessed the non-verification of the data.'

<No + event deverbal nominal> also patterns with states. It cannot be the subject of the predicate *acabar* ('to end') and it rejects modifiers that refer to the velocity at which the eventuality takes place, such as *rápido* ('fast') (3).

(3) a. \*La no construcción del puente ha acabado.  
 the no construction of the bridge has ended  
 '\*The non-construction of the bridge has ended.'

b. \*La rápida no construcción del puente por parte de los  
 the fast no construction of the bridge by part of the obreros.  
 labourers  
 '\*The fast non-construction of the bridge by the labourers.'

I propose an analysis that accounts for the mixed properties of these nominalizations, assuming Ramchand's (2008) VP structure and a syntactic analysis for nominalizations (Alexiadou 2001; Fábregas 2016). Thus, the structure of *verificación* is the one illustrated in (4). The verbal base involves Proc(ess)P, projection associated with dynamicity, and Init(iation)P, which expresses the causative subevent (Ramchand 2008). NP merges with InitP, so the verbal domain is left behind. My proposal is that, in the structure <no + event deverbal nominal>, *no* occupies a NegP merged with InitP (4), so it refutes the relation between the causative and the process subevents, in line with Fábregas & González Rodríguez's (2020) proposal for the verbal domain. The refutation of the causative relation between these subevents, now related through an inhibition relation, gives rise to the inhibited eventuality reading: (1) denotes an eventuality that consists in the scientist inhibiting himself from verifying the data.

(4) [NP *-ción* [NegP *no* [InitP *por parte del científico* [ProcP ... [ $\sqrt{\text{verificar}}$ ]]]]]

The analysis proposed accounts for the mixed properties of the construction. For the eventive properties, *tener lugar* ('to take place') and perception verbs request that its subject and their internal argument, respectively, refer to an event. This requisite is satisfied by the construction, as ProcP is projected in the structure of the nominal, its subevent being identified by the predicate. For the stative properties, *acabar* ('to end') and *rápido* ('fast') select dynamic eventualities. As the subevents

expressed by InitP and ProcP are related through an inhibition relation and process does not take place, <*no* + event deverbal nominal> lacks dynamicity.

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## Why don't grammaticalization pathways *always* recur?

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**Keywords:** grammaticalization, informativity, actuation, experimental approaches to language change

Many grammaticalization pathways recur across languages. According to the Lexical Determinism Hypothesis, the properties of lexical items determine their developmental pathways (Bybee et al. 1994). However, it is unclear why these pathways do not *always* occur. This question, which Weinreich et al. (1968) called the actuation question (see also De Smet (2012), Walkden (2017), and the papers in Andersen (2001)), is at the heart of historical linguistics. It is possible that most linguists assume that whether or not a particular grammaticalization pathway has occurred in a particular language can be chalked up to the fundamentally probabilistic nature of language change; however, cf. proposals for reasons that a language did or didn't undergo a particular developmental pathway in, e.g., Fischer (1997, 2007); Verstraete (2008); De Vogelaer (2010); De Smet & Van de Velde (2017); Gafter et al. (2019).

In this talk, we ask why English did not undergo a cross-linguistically common grammaticalization pathway, FINISH > ANTERIOR (Bybee et al. 1994). We treat earlier proposals regarding the pragmatic and discursive factors in the grammaticalization of *acabar de* + INFINITIVE [*finish* PREP INFINITIVE] in Spanish as testable general hypotheses about the syntactic and semantic properties of collocations involving finish verbs. In particular, we test two hypotheses: (i) that overt verbs are more likely to occur when they describe an informative event, and (ii) that finish constructions are associated with marking discourse progressions. The tight association with uninformative events and with discourse progressions have both been claimed to be crucial for the development of *acabar de* + INFINITIVE constructions into anterior constructions in Spanish (Rosemeyer & Grossman 2017).

We test these hypotheses by conducting a corpus study and an experimental study on English. The results of our corpus study show that English *finish* + GERUND constructions (e.g., *He finished drinking the coffee*) are indeed associated with some of the distributional properties attributed to Early Spanish *acabar de* + INFINITIVE constructions, but speakers do not show evidence of conventionally associating FINISH constructions with a particular type of inference that was claimed to be crucial for the grammaticalization of the Spanish anterior. In particular, while English does use *finish*

constructions to highlight narrative progressions, as in Early Spanish, no close association between English *finish* constructions and uninformative events was found (Rosemeyer & Grossman 2017).

In order to test whether English hearers have reanalyzed the use of gerunds in anteriority-indicating contexts in terms of discourse progression, we conducted an experiment in the non-cumulative self-paced reading moving-window paradigm. Our analysis did not provide evidence for the hypothesis that a hearer-based reanalysis of the use of gerunds in English *finish* constructions has taken place. While our corpus study shows that speakers routinely employ gerunds in order to highlight discourse progression and that this effect is stronger for uninformative gerunds at least in some syntactic contexts, hearers have not reanalyzed this usage of gerunds as indicating solely discourse progression.

We propose that the non-conventionality of this inference blocks the grammaticalization of English *finish* constructions as anterior constructions, demonstrating that some of the black box of language change currently attributed to chance can be explored empirically.

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## Modality and argumentative patterns

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Keywords: modalities, connectives, corpus linguistics, cooccurrence, statistical tools.

The main aim of our research is to focus on the argumentative patterns specific to different semantic types of modality. As modal forms do not directly modify the state of affairs expressed in an utterance, their analysis is better documented if we consider the rhetorical level of discourse. Thus, the modal forms we examine (*pouvoir, devoir, falloir*) are analyzed in relation to the connectives that give rise to particular argumentative patterns, reflecting the rhetorical level of discourse. Our theoretical background consists of the wealthy literature highlighting the polysemy and polyfunctionality of modal forms. The study of modality displays a rich amount of theoretical backgrounds (such as cognitive pragmatics – Saussure & Barbet 2012; evidentiality framework – Dendale & Tasmovsky 2001, Desclés & Guentcheva 2001; formal semantics – Kaufmann & Kaufmann 2015, Kratzer 1991) to account for the diversity of semantic flavors that a modal form can take, depending on the context in which it occurs. Our purpose is to propose a new framework which assumes that (i) modal forms endorse an abstract semantic content which is systematically activated; because of that, there is a correlation between the semantic type of a modal form and the argumentative pattern created by a given connective through its capacity to confer a different status to its left and right content; (ii) that the frequency of the occurrence of a modal form in one particular argumentative pattern shapes the different flavors that the form endorses. (i) Using a corpus linguistic approach with statistical tools, our results show that a modal conveying the semantic type “necessity” such as *devoir* and one conveying “possibility” such as *pouvoir* have symmetric behaviors with connectives expressing purpose – *devoir* is significantly associated with such connectives when it occurs to their left and significantly “dissociated” when it occurs to their right, whereas *pouvoir* is only significantly associated to their right. The argumentative pattern expressing concession with a connective like *mais* shows similar differences in the behavior of *pouvoir* and *devoir*: *devoir* is significantly “dissociated” from *mais* when it occurs before it and significantly associated with *mais* when it occurs after it, whereas *pouvoir* is significantly associated with the connective in both places. (ii) As for the flavors that a modal verb can endorse, we also observe differences concerning the right or the left position of the modal in relation to one particular connective. *Pouvoir*, which is significantly associated both to the left and to the right of *mais*, can endorse a capacity/permission value (root modality) or an epistemic value. In the first case, it occurs slightly more frequently to the right of *mais* and in the second case to its left. Such a tendency becomes clearer with the epistemic adverb *peut-être*. We use the following methodology: we identify the connectives showing a statistically significant association with each modal verb using corpora representing two genres of informative discourse – press and encyclopedia. Selecting different genres allows us not only to cross-evaluate the results but also to assess the impact of the genre on the selection of the argumentative pattern by the modal.

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From formation to alternation: The case of the Nafsan psych domain

Julian Andrej Rott & Ana Krajinović  
<not updated>

## **The development of Votic-Ingrian convergent varieties: evidence from a chain rune**

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Keywords: convergence, language contact, Votic, Ingrian.

This paper is a case study of a Votic chain rune *Kuza piippu?* ‘Where is the pipe?’ in the context of Votic-Ingrian language contacts. Votic and Ingrian are minor Finnic languages which have been in close contact for centuries. There are numerous recent publications on language contacts (Myers-Scotton 1997, Muysken 2000, Thomason 2001, Auer et al. 2005, Heine, Kuteva 2005, Aikhenvald, Dixon 2007, Deuchar et al. 2007, Siemund, Kintana 2008, Matras 2009, Hickey 2010, Braunmüller et al. 2014, etc.), but most of them investigate the interaction of unrelated or remotely related languages, while contacts between closely related languages have received less attention both from theoretical and empirical viewpoint. Contacts between the related Votic and Ingrian are not an exception: though they are mentioned in several sources (Ariste 1968, 1981, Laanest 1977, etc.), a detailed analysis is given only in (Muslimov 2005).

The rune *Kuza piippu?* is well known to the researches of the Votic language, but it was never an object of a thorough linguistic study. In this paper, we compare 13 variants of this rune collected in Votic villages in the end of the 19th-20th century (Mustonen 1883, Salminen 1928, Mägiste 1959, and Ariste 1960, 1986), 3 variants recorded during our fieldwork in the village of Luuditsa in the 21st century, and 24 variants of the same rune in the related Finnish, Karelian and Ingrian varieties represented in the corpus of Finnish folklore (SKVR 2020).

The rune provides much evidence on the Ingrian-Votic contact influence. In this talk, we mainly focus on two phenomena observed in four first lines of the rune: ‘Where is the pipe? Under the granary/fence. Where is the granary/fence? The fire has burnt (it)’. First, there is an alternation of the words *ratiz* ‘granary’, *aitta* ‘granary’, and *aita* ‘fence’. *Ratiz* is the authentic Votic word for ‘granary’ found mostly in the oldest variants of the rune. *Aitta* is the Ingrian word for ‘granary’ that was not

widely adopted and is often replaced by the phonetically closest Votic word *aita* with the meaning ‘fence’. The last two variants are observed in the rune since the middle of the 20<sup>th</sup> century.

Second, the postpositional phrase *ratti alla* ‘under the granary’ found in the older variants of the rune was replaced by constructions transcribed in the sources as *aitan(n)alla* ‘under the granary’ or *aijan(n)alla* ‘under the fence’. The formative *n(n)* between the nominal stem and postposition is the Ingrian genitive marker. It appeared as the result of a matter borrowing *aita-n alla* ‘granary-GEN under’ but was later reanalyzed as the first consonant of the postposition because the Votic genitive does not have a marker: *aija nalla* ‘fence.GEN under’.

Our study reveals some principles of variation and language change triggered by contacts of closely related languages. One of such principles is the iterative convergence. Lower Luga Ingrian that has itself developed as a convergent variety based on Ingrian and Votic affects the language of Votic speakers, and gives rise to new convergent variants on the scale of Votic-Ingrian continuum.

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## On definite article *el*: A spell-out of inherent case? Evidence from Spanish

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Key words: Spanish, syntax, embedding, variation, inherent case.

**1. THE MAIN IDEA:** The definite article preceding embedded clauses in Spanish (Leonetti 1999, Picallo 2001, Serrano 2015) is a mark of inherent Case. I take this: (i) to be an argument in favor of the nominal nature of such clauses (Picallo 2001), and (ii) to account for the behavior (distribution, island effects, semantic constraints, etc.) of embedded clauses headed by the definite article.

**2. THE FACTS:** Spanish embedded clauses can *optionally* be introduced by a definite article, which I refer to as “el(que)ismo:”

- (1) a. Nos gusta [que digas eso] b. Nos gusta [el [que digas eso]]  
 CL-we like-3.sg that say-2.sg that CL-we like-3.sg the that say-2.sg that  
 ‘We like that you say that’ ‘We like that you say that’

Empirically, the distribution of “el(que)ismo” (EL(Q), henceforth) is manifold.

First, it is preferred in subject positions:

- (2) a. Nos gusta [el que digas eso] b. \*Quiero [el [que digas eso]]  
 CL-we like-3.sg the that say-2.sg that want-1.sg the that say-2.sg that  
 ‘We like that you say that’ ‘I want that you say that’

Second, it mostly appears in subjunctive: indicative is ruled out in most of the contexts:

- (3) a. [El [que sufras]] me preocupa b. \*[El [que sufres]] me preocupa  
 the that suffer- CL-me worry-3.sg the that suffer- CL-me worry-  
 sub.2.sg ind.2.sg 3.sg  
 ‘That you suffer worries me’ ‘That you suffer worries me’

Third, EL(Q) is ruled out in ECM contexts (perception (4) and causative verbs). Control and volitive verbs seem to reject it too.

- (4) \*Ana vio [el salir a Juan]  
 Ana saw- the go- DOM Jan  
 3.sg out-inf  
 ‘Ana saw Juan getting out’

Fourth, EL(Q) turn transparent CPs into islands, blocking A/A-bar movement:

- b. Qué te molesta [(*\*el*) que digan]?  
 what CL-you bother- the that say-  
 3.sg sub.3.pl  
 ‘What does it bother you that they say?’

**3. PROPOSAL:** The evidence above suggests that EL(Q) is the spell-out of a Case morpheme, not a true determiner. Given the island status and the reluctance to show up in first-Merge position, I take such Case to be of the **inherent type**. I assume the following structure, with “el” occupying the Khead:

(6) [K(ɛl) [C [. . . ] ] ]

**4. PREDICTIONS:** There is a constrain on EL(Q) appearing in first-Merge (complement) position. This is supported by the fact that prepositions cannot take EL(Q) clauses (7). In addition, EL(Q) is also incompatible with embedded interrogatives.

(7) Alba se alegra de[\*ɛl] [ que  
vengas]] Alba SE glads of the that come-2sg  
'Alba is happy that you come'

Finally, if we can force EL(Q) to occupy a non-complement position (derivationally), then the problem with first-Merge position should go away. This is borne out with cleft sentences:

(8) [El [que digas eso]] es lo que quiero  
The that say- that is it that want-  
2sg.sub 1sg  
'It is that you say that what I want'

**5. CONCLUSIONS:** This paper has investigated EL(Q) in Spanish, a phenomenon that has not received much attention in the literature. I have argued that the definite article is the spell-out of a Case projection, which I have taken to be inherent. The proposal makes a series of empirical predictions concerning the incompatibility between EL(Q) and first-Merge positions.

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## The influence of demographic changes on the morphological and syntactic complexity of German

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Keywords: Corpus linguistics, German, Historical linguistics, Sociolinguistics, Kolmogorov complexity

This paper investigates the effect of urban population developments and morphological as well as syntactic complexity in German between 1600 and 1900. It has been observed that in this period, language and dialect contact triggered by (mass) immigration to the urban centers were driving forces of linguistic change in the Germanic languages (Carroll et al. 2012: 165). This type of change, furthermore, has been claimed to cascade from the largest city to the next largest city and so on (Labov 2001: 285). Following previous research on German and other Germanic languages (e.g. Szmrecsanyi 2012 for English), we expect to find a long-term decrease in morphological complexity on the one hand and an increase of syntactic complexity on the other hand across the centuries.

Additionally, we also expect this development to be more prevalent after periods characterized by major population growth than after periods that only saw minor changes in the countries' population.

Linguistic complexity and urban demography developments is approached quantitatively in terms of an internal linguistic complexity variable and external demographic variables. From the variety of measures that have been proposed to measure linguistic complexity (see Ehret 2017 and Bentz et al. 2016), we selected an aggregate text-based measure based on *Kolmogorov complexity* or *algorithmic complexity* (Kolmogorov 1965; Li and Vitányi 2019). More specifically, we made use of the distortion and compression-technique for non-parallel corpora proposed by Ehret (2017) to control for register and text length. We apply the algorithm to selected texts published between 1603 and 1899 from the German reference corpus Deutsches Textarchiv (2021).

For the operationalization of the demographic variable, we rely on several urban population databases (Bairoch et al. 1988, Chandler 1987, De Vries 1984, Fink-Jensen 2015, Mitchell 1998). For each time slice  $t$  and language area  $l$ , we calculate two measures: the average urban growth ( $G_{t,l}$ ) and the urbanization ration ( $R_{t,l}$ ).  $G_{t,l}$  is calculated by averaging the difference in the number of inhabitants in the largest cities in the area of Germany and Austria (using modern borders for practical reasons) at two consecutive time points, weighted for their rank. The weighing factor is motivated by the assumption that language change tends to radiate from larger urban centers to smaller ones (Labov 2001: 285), so that larger cities have a higher influence on language change.  $R_{t,l}$  is calculated as the share of inhabitants of urban areas in the total population.

In our analysis, we will build a generalized linear mixed-model, with the Text File as a random factor. By working with population measures at different times, instead of looking at the overall trend from the first to the last data point, the model can pick up on accelerations and decelerations in intermediate centuries, lowering the risk of a spurious correlation between population and language.

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## Defining Contrast

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Keywords: focus, fronting, contrastivity, confirmative focus, additive focus

The distinction between contrastive and non-contrastive focalization plays a fundamental role in the study of information structure. Yet, the definition of *contrast* is still debated (Rooth 1992, Büring 1997, 2003, Kiss 1998, Molnár 2002, Molnár & Winkler 2006, Kenesei 2006, Zimmerman 2008, Krifka 2008, Repp 2010, Repp & Cook 2010, Horvath 2010, Krifka & Musan 2012, Neeleman & Vermeulen 2012, and Bianchi et al 2016).

Determining the predictions made by different analyses across different types of focalization exchanges is an essential step towards their empirical testing. This talk takes this step with respect to the definition of contrast in Krifka (2008), where contrast occurs between the proposition denoted by the current utterance and other relevant propositions in the common ground, and Neeleman and Vermeulen (2012, henceforth 'N&V'), where contrast implies the denial of at least one alternative proposition evoked by focalization. While the definitions differ, their authors do not compare them and only discuss exchanges where they make similar predictions, leaving unclear whether they are genuinely empirically distinct.

This talk addresses this issue by examining several different focus-eliciting exchanges undiscussed, or only briefly touched, by Krifka and N&V. For each exchange, I will examine whether contrast is predicted present or absent under each definition.

For example, I will show how in the confirmative exchange (1), B does not contrast with any proposition in the common ground and is thus non-contrastive under Krifka's definition. B, however, is contrastive under N&V's definition whenever uttered with the intention to imply that John only hit Tom and no other contextually salient boy.

- (1) A: John hit TOM yesterday.  
B: Yes, John hit TOM<sub>Foc</sub>.

Similarly, assume that in the additive exchange (2) A is describing the fights amongst his three children: Bill, Jack, and Tom. Under Krifka's definition, B involves contrast with A's proposition, now part of the common ground. Contrast is instead absent under N&V's definition. Since Bill has hit Jack and Tom, there is no contextually salient third child he might have also hit, and hence no potential denial of such proposition either.

- (2) A: Bill hit JACK, yesterday  
B: Yes. He hit TOM<sub>Foc</sub>, TOO.

The talk will show that Krifka's and N&V's definitions make divergent predictions also with respect to closed question exchanges and a subtype of confirmative exchanges, and that they make convergent predictions with respect to corrective and open question exchanges, plus three subtypes of confirmative and additive exchanges.

The identified convergences and divergences will be shown to exclude subsumption between the two definitions. Most important, they enable empirical testing based on contrast-triggered phenomena, such as English focus fronting. By testing the acceptability of focus fronting across different exchange types, we can determine which definition best fits the empirical data. The talk will report on the design of such an experiment currently in its final development phase at our institution. Pandemics permitting, empirical results potentially obtained by August will also be reported.

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## The impact of lexical co-activation through cognates on L2 rule learning

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Keywords: cognates, rule learning, vocabulary learning, explicit learning, artificial language

**Introduction.** According to Hopp’s (2014) Lexical Bottleneck Hypothesis, difficulties in second language (L2) lexical processing lead to non-target syntactic computations. In line with this hypothesis, cognates—which are processed faster than non-cognates, as defined by the cognate facilitation effect—ease L2 syntactic processing (Miller 2014; Hopp 2017). The current study investigated, for the first time, whether cognates additionally facilitate L2 syntax learning. Our hypothesis claimed that the use of a cognate vocabulary would ease L2 rule learning.

**Methods.** Forty Spanish natives with no previous knowledge of Basque ( $M_{age} = 22$ ) learnt an artificial language drawing on that language. First, a pre-test consisting of a sentence-picture matching task corroborated that participants were not familiar with Basque. Then, they were split into two groups. Each group explicitly learnt (i) either 30 Spanish-Basque cognates or non-cognates with the help of a picture-matching task and (ii) a case-marking rule yielding SOV and OSV sentences. The subject was marked with an “-ak” and the object with an “-a” (1).

- (1)
- |                                     |                     |                 |                    |
|-------------------------------------|---------------------|-----------------|--------------------|
| a. Aktore- <b>ak</b>                | mediku- <b>a</b>    | pintatu du      | (cognate, SOV)     |
| a’. Antzezle- <b>ak</b>             | sendagile- <b>a</b> | margotu du      | (non-cognate, SOV) |
| actor-S                             | doctor-O            | painted has (V) |                    |
| b. Mediki- <b>a</b>                 | aktore- <b>ak</b>   | pintatu du      | (cognate, OSV)     |
| b’. Sendagile- <b>a</b>             | antzezle- <b>ak</b> | margotu du      | (non-cognate, OSV) |
| doctor-O                            | actor-S             | painted has (V) |                    |
| “The actor has painted the doctor”. |                     |                 |                    |

A second sentence-picture matching task tested learners’ ability to apply the rule, assessed by accuracy rates and reaction times. By extrapolating the postulates of the Lexical Bottleneck Hypothesis from language processing to language learning, it was assumed that the easier lexical processing was, the easier it would be to learn the grammatical rule. We predicted that cognate learners would achieve a greater rule learning than non-cognate learners (higher accuracy and faster reaction times). Finally, a post-test made up of previously unheard cognate sentences tested whether non-cognate learners’ rule learning improved when the vocabulary became cognate with their native language. We predicted that, due to the cognate facilitation effect, non-cognate learners’ accuracy and reaction times would be better in the post-test than in the test.

**Results.** The findings of the study corroborated the hypothesis. While cognate and non-cognate learners performed similarly in the pre-test ( $p > .05$ ), after being taught the vocabulary and the rule of the language cognate learners significantly outperformed non-cognate learners in terms of accuracy and reaction times in the test and the post-test (both  $p < .0001$ ). Furthermore, non-cognate learners’ performance significantly improved by 15% and 1.15 seconds ( $p < .0001$ ) in the post-test.

**Conclusions.** This study sheds light on the highly overlooked relationship between lexical co-activation and syntax learning. More precisely, it shows, for the first time, that cognates facilitate L2 rule learning. This is attributed to the fact that retrieving non-cognates from the lexicon is more costly

than retrieving cognates, and this causes non-cognate learners to have fewer resources to learn a grammatical rule. These results align with the Lexical Bottleneck Hypothesis and further extend its postulates from L2 syntax processing to L2 syntax learning.

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## Indeterminacy and impersonalization in Brazilian Portuguese discursive practices.

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Keywords: Indeterminacy, Impersonalization, Defocusing, SE pronoun, Construction grammar

We use a variety of strategies to express discursive impersonalization or indeterminacy. In these processes, we observe the demotion of the participant responsible for a state-of-affairs in a verbal predication, the inductive force: in the first, there is an emphasis on the opacification of the speech's first person; and, in the second, the focus is on a generic person, a third person. In this study, we evaluated, by a corpus-based statistical multifactorial analysis, the variation of three allostructions used in written Brazilian Portuguese, that are triggered by the mentioned functions and that will be described below:

- (i) {[ [Direct Transitive Verb]simple predicate + clitic pronoun SE] [Participant 2 (nonverbal element)]}predication (*Analisam-se* cláusulas justapostas/We (They/One) analyse juxtaposed clauses);
- (ii) {[ (Semi)auxiliary Verb + clitic pronoun SE + Direct Transitive Verb]complex predicate [Participant 2 (nonverbal element)]}predication (*Buscou-se analisar* estas estruturas / Someone sought to analyse these structures);
- (iii) {[ Verb TER + clitic pronoun SE]simple predicate [Participant 2, (nonverbal element)]}predication (*Tem-se a análise* das representações /We (someone) have analysis of the representations).

We collected data from online academic and journalistic texts and, in the development of the (quali-)quantitative analysis, we verified that the constructions presented in (i) and (ii) can be activated to promote indeterminacy or impersonalization. The construction presented in (iii), in addition to promoting impersonalization, is also used in existential sentences, that is, in predications without an

inductive participant, a context in which it almost competes with the verbal form *haver* (there to be), without a referential subject.

We will present results of the multiple regression analysis elaborated via the GoldVarbX Program. We also design a discursive-communicative *continuum* of indeterminacy~impersonalization, in which we can observe or recover some degree of inductive/agentive involvement in the predication of one of the possible discursive person references (1st, 2nd and 3rd), the association between them or some of them, as well as the predication without participant. This *continuum* seeks to reveal that the demotion of the suspended participant can be observed in gradation: in contexts that reveal the defocusing only of the text's author or of a third discursive person; in cases that reveal an interaction between author or interlocutor, by a referent voice that represents a group; in contexts in which it is not possible to infer a participant or it appears to be non-existent.

The preliminary results indicate that, in the analysed theses and dissertations, the constructions are more used to describe the researcher's own actions and positions while in the editorials and opinion articles they point to the knowledge shared by a certain group (readers), or to the actions of a third person, usually linked to the political universe.

To investigate the phenomenon of variation and to analyse the topics mentioned above, we considered the theoretical methodological assumptions of the socioconstructionist theories (Machado Vieira, 2016, 2017; Wiedemer; Machado Vieira, 2018), the constructionist and cognitivist ones (Bybee, 2013, 2010; Cappelle, 2006; Fillmore, 1982; Goldberg, 1995, 2006; Langacker, 1987, 1991, 2008; Traugott; Trousdale, 2013).

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## The processing of scare quotes in English

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Keywords: Quotes; irony; English; processing; reading time

While there is a large body of literature on the semantics of scare (ironic) quotation and its use conditions (see, e.g., Meibauer 2007; Predelli 2003), the function of scare quotes in online processing has remained understudied. We aim at investigating this topic relying on a reading time experiment, in which we test the six conditions (b, d, f with quotes in target sentence) illustrated in (1).

(1) Context sentences

a / b Literal meaning

*Yesterday, a young woman won the jackpot of this month's lottery. She decided to donate ten million of the thirty million dollars to cancer research.*

c / d Ironic meaning

*Yesterday, a young woman won the jackpot of this month's lottery. She decided to donate sixteen cents of the thirty million dollars to cancer research.*

e / f Unrelated meaning

*Today, a small mouse damaged the engine of the Prime Minister's car. He decided to take the bicycle of his neighbor's grandson to the important summit.*

Target sentences

a – f *We all hope that the generous / "generous" lady uses the rest of the money to fulfill her own dreams.*

We measured the reading time at several positions in the target sentence (after *that* (RT1); after *lady* (RT2); after *dreams* (RT3)). Further, subjects were asked, after the target sentence, how well the final sentence (i.e., the target sentence) fitted to the preceding ones (i.e., the context sentences) on a scale from 1 ("Fits extremely well") to 6 ("Fits extremely badly"). The rating time was also recorded. 36 native speakers of English participated in the study, in which we used a total of 60 examples (see 1). Each subject was tested on each example in one condition only (60 trials per person). While no significant differences across the conditions emerged at RT1, quotes led to significantly longer reading times across the board at RT2 (with quotes = 1091 ms, without quotes = 925 ms). At RT3, quotes caused (non-significantly) longer reading times in (2b) in comparison to (2a) (2081 (with quotes) vs. 1972 ms) but (significantly) shorter reading times in (2d) compared to (2c) (1992 (with quotes) vs. 2184 ms). No difference was detected for the unrelated meanings (1584 vs. 1584 ms). The rating indicated significantly lower / better values for ironic utterances with quotes in comparison to the same utterances without quotes (2.27 (with quotes) vs. 3.22). The opposite picture emerged for the literal utterances (3.03 (with quotes) vs. 1.79). No difference was found between the two unrelated conditions (5.19 (with quotes) vs. 5.36). The RATING TIME data showed (non-significantly) shorter times for the ironic cases with quotes compared to the ironic examples without quotes (2632 (with quotes) vs. 2810). The opposite pattern, this time significant, was detected for the literal utterances (2859 (with quotes) vs. 2360). No difference appeared for the unrelated conditions (1793 (with quotes)

vs. 1835). The results of our study will be discussed in light of the debates about the theoretical implementation of quotes in semantic and pragmatic approaches.

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## On vocative positions in Spanish *wh*-interrogatives: New insights into the left periphery

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Keywords: *wh*-interrogatives, vocatives, word order, left periphery, acceptability judgment task

This paper bridges two previously independent domains of linguistic research: *wh*-interrogatives and vocatives structures. More specifically, we investigate in which positions Spanish speakers accept vocatives in *wh*-interrogatives introduced by d-linked *wh*-phrases (such as *a qué chica* ('which girl')), *por qué* ('why') and *qué* ('what').

According to Zwicky (1974), vocatives can occupy three different positions depending on their semantic-pragmatic function: initial, used to attract the attention of the interlocutor (call function), middle and final, both employed to maintain the contact between speaker and listener (addressee function):

- (1) (**Celia**), dicen(, **Celia**), que la están esperando(, **Celia**).  
Celiavoc say-3PLCeliavoc that you-F are-3PL waiting Celiavoc  
'(Celia,) they say that they are waiting for you(, Celia)'.

In contrast to Spanish declaratives, the word order *wh*-interrogatives is restricted and the *wh*-phrase is adjacent to the verb (Francom 2012). However, there are also some exceptions to this rule, like d-linked *wh*-phrases and *por qué*. The related literature focuses on different elements, such as subjects, and the position they occupy relative to the *wh*-phrase. However, to the best of our knowledge, there is no research on vocatives appearing in *wh*-interrogatives. We will fill this gap by answering the following research questions:

1. In which position are vocatives accepted in *wh*-interrogatives?
2. Do d-linked *wh*-phrases and *por qué* pose less restriction on the middle positions of vocatives than bare *wh*-elements?
3. Which position(s) do initial, middle, and final vocatives occupy in the left periphery?

To this end, we conducted an acceptability judgment task which is based on the Latin square design. The two independent variables are *wh*-phrase (*por qué*, d-linked *wh*-phrases, and *qué*) and vocative position (initial – at the beginning of the interrogative, middle – intervening between the *wh*-phrase and the verb, and final – at the end of the interrogative). 56 speakers from Central Spain took part in the experiment.



A crucial quality to assess in strangers is trustworthiness. Typically, we trust ingroup members more than outgroup members (Balliet et al. 2014, and Evans & Krueger 2009), but the identification of group members requires reliable markers of group affiliation. It is debated which phenotypic or symbolic tags – including linguistic markers – meet the criteria (Cohen 2012). Linguistic tags may have played a role in the evolution of human trust and cooperation (Nettle & Dunbar 1997) and artificial language experiments have shown that linguistic variation can mark group membership (Roberts 2013, and Kerr & Smith 2016). However, linguistic cues can be faked (Knight et al. 1995), and a large-scale experimental study did not find a link between shared dialect and trust (Jensen et al. 2015).

We investigate (a) whether listeners trust speakers who share their language more than those who speak a different language, and (b) how language compares in this respect to other markers of group membership. To address these questions, we combine two established experimental methods, trust games (Berg et al. 1995), and artificial languages (Roberts 2017).

In Experiment 1, participants ( $n = 41$ ) play an online game, assuming the role of a red-coloured alien that lives on a planet together with other red and yellow aliens. Each of the two alien groups speaks a distinct artificial language. After a familiarisation stage, participants play a simultaneous trust game with two aliens (one ingroup, one outgroup) whose language they hear but whose colour they do not see. These aliens appear to be other participants but are bots. Participants receive an endowment of 10\$, which they can freely divide between the two aliens. Whatever amounts they send are tripled, and the other aliens can keep the money or return a share. Thus, the amounts participants send measure their relative trust in their counterparts. We expected participants to send more money to the ingroup alien. Indeed, a multilevel linear model showed that participants sent significantly more money to aliens sharing their own language. Also, it appears that longer decision times further decreased the amounts sent to the outgroup aliens. However, the size of the effect was small, and it was limited to a subset of participants.

In Experiment 2, we compare the effects of different tags on trust. The set-up is analogous to Experiment 1, but group affiliation is indicated not only by linguistic cues but also by physiological traits (foot shape) and costume (hat type). Once again, we measure how the tags affect trust. Due to conflicting positions in the literature, we parsimoniously predict no difference between the effect of each group marker on trust.

It is crucial to understand when language promotes trust, or, conversely, hinders cooperation. Our experiments contribute to ongoing debates on language and social identity in sociolinguistics (Eckert 2018, Sneller & Roberts 2018, and Cohen & Haun 2013), and language evolution (Richerson & Boyd 2010). Merging methods from cultural evolution and behavioural economics, our approach also tests the viability of novel experimental approaches in linguistics (Roberts 2017).

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## **Evolution of case systems**

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**Keywords:** nominal case, word order, phylogenetics, language evolution, typology

The presence of nominal case systems has often been associated with both verb-final word order and flexible word order. Typologically, distinguishing between A and P arguments with the help of case marking is more widespread in verb-final languages than in verb-initial and verb-medial ones (Dryer 2002, Siewierska & Bakker 1996). The frequent combination of these features appears to be functionally motivated. Firstly, the roles of A and P arguments are established early on in the utterance structure (Siewierska & Bakker 1996). Secondly, the need to disambiguate between the arguments is stronger when they are adjacent rather than when the verb separates them (Gibson et al. 2013, Futrell et al. 2015). The co-occurrence of nominal case and flexible word order, in turn, has been explained in the light of the trade-off hypothesis (Sinnemäki 2014) and a theory of licensing and structural case (Kiparsky 1997). These theories suggest that languages in which positions of A and P arguments can vary require additional grammatical cues to distinguish between these roles. By contrast, case is redundant in languages with rigid word order.

Here we test these associations on a global scale using a large dataset of grammatical structures, and controlling for phylogenetic non-independence. The typological data on case, word order type,

and word order flexibility has been obtained from a large global dataset, *Grambank* (The Grambank Consortium 2020), containing 195 grammatical features from over 2,070 languages. Within the framework of our study, the nominal case refers to a morphological distinction between the forms of A and P arguments. The interpretation of word order flexibility applies to the order of core arguments. With regard to the word order type, we distinguish between languages with verbs always following both A and P arguments in transitive clauses – verb-final position – and other word order types.

To test whether these functional hypotheses hold, we use a Bayesian Phylogenetic approach (Pagel et al. 2004) and a range of language phylogenies (e.g. Bouckaert et al. 2012, Jäger 2018) to model the co-evolution of these traits. We fit dependent and independent models of trait evolution for two feature pairs: case and verb-final word order as well as case and flexible word order. We then undertake a phylogenetic path analysis (van der Bijl 2018) to explore the potential indirect influence of word order flexibility through verb-final word order type on the development of nominal case.

We find strong support for the co-evolution of case and verb-final word order (B.F. > 74). This is consistent with the hypotheses that nominal case provides grammatical information at the beginning of the utterance and/or when the arguments are adjacent. We also establish a significant relationship between nominal case and flexible word order (B.F. > 58). These results are in line with proposals that nominal case serves to disambiguate between A and P arguments in languages with flexible word order. Overall, in the light of the phylogenetic methods, our findings confirm that nominal case co-evolves with both verb-final word order and flexible word order on a cross-linguistic scale.

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From deixis to vagueness: Hedging expressions in Modern Hebrew

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<not updated>

## **Borrowing, reanalysis and extension as mechanisms underlying syntactic changes of some structures with infinitives in Old Polish**

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Keywords: infinitive, Old Polish, Latin, extension, reanalysis

This paper discusses the syntactic changes of constructions with infinitives as a subject of a sentence in the Old Polish language. The structures such as *powyszyć słuszno syna człowieczego* ‘it is right to exalt the son of a man’, have not been explored in depth in Polish historical research. Krystyna Pisarkowa interpreted the role of the infinitive in such structures as the only formal subject of an impersonal sentence (1984: 34). According to Bartnicka (1982: 219), in contemporary Polish, the infinitive in such combinations should not be treated as a subject but as an element of an analytical modal predicate in nonagentive sentences, due to semantic limitations of predicates. The syntactic change leading to such an interpretation was a result of several processes. The author follows the hypothesis that there are three basic mechanisms of syntactic change: borrowing, extension, and reanalysis (Harris, Campbell 1995).

The analysis of Polish medieval texts shows that the constructions with infinitive-subject are a replication of Latin syntactic patterns (with gerundium as a subject of a sentence, and ACI), e.g.:

*A tegodla podobno jest w sobotę dobrze czynić.* (Rozmyślanie przemyskie 326);

*Itaque licet sabbatis benefacere* (Mat 12, 13).

Extension is a mechanism that results in changes in the surface manifestation of a pattern, e.g., adverbization of adjectives and a change in word order. As a consequence, reanalysis occurs, i.e., a mechanism that changes the underlying structure of a syntactic pattern and which does not involve any modification of its surface manifestation.

These results provide a significant first step towards the further analysis of the syntactic evolution of infinitive in Polish, but also in other Slavic languages. The method used here can be as well applied to other structures of Polish syntax, such as adjective phrases (see Rutkowski 2006), numeral phrases, nominalisations, and others.

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## How dialectal is a contemporary base South Slavic patois? An experimental study based on speech production

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Keywords: South Slavic, Serbian, dialectology, microvariation, dialect coherency

The paper deals with qualitative and quantitative analysis of a contemporary spoken data produced by the sociolinguistically prototypical dialect informants in a Serbian Timok patois. The transcribed data come from the author's field research conducted in Eastern Serbia; analysed texts (converted in IPA) are published in (Sobolev 1998). The question is, to what degree are the texts dialectally coherent? Do they represent the base Timok dialect (Sobolev 2014), the contemporary regiolect, the regional standard (standardoid) or something else? In this matter, the vertical standard Serbian influence and parameters of horizontal microvariation should be taken into account. The features of the base patois, or "dialectal oppositions" are analysed at all linguistic levels (accent: *sramot'á ~ sram'ota* 'shame'; phonetics and phonology: *b'ǎdɲak ~ b'adɲak* 'Christmas tree', *v'lna ~ v'una* 'wool'; morphology: *dev'ojteutu.ACC.SG.DEF* 'girl'; morphonology: *zn'ǎef ~ zn'af.PRAES.2SG* 'know'; morphosyntax: *ǐfu da n'ajdem.FUT.1SG* 'find'; syntax: *on'á iz ofl'ane* 'she comes from Oshlyane'; lexicon: *grsnit'ǐǐǐfe ~ konopl'ǐǐfe* 'cannabis field') and contrasted to the corresponding features in the neighbouring Serbian dialects and in the standard Serbian language (Sobolev 2020). The latter are the background against which distribution of the base patois features is assessed. In such manner the dialect coherence of the texts is established. The paper focuses on criteria and parameters for the measurement standards, or etalons for dialect texts, creating a base for future comparison of doculects (texts reflecting speech production) in all existing forms of South Slavic languages. Finally, advancement in machine analysis is discussed.

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## Polish deconverbal discourse markers with the exponent of negation

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Keywords: pragmaticalization, discourse markers, negation, converbs, Polish

The paper focuses on the problem of Polish discourse markers or discourse structuring elements (DSE; on the problem of the terms referring to this phenomenon c.f. Fischer 2006) consisting of at least two elements: the exponent of negation *nie* (ang. *not*) and an expression homographic with an adverbial participle (converb - Dryer, Haspelmath 2011; Haspelmath, König 1995) such as e.g. *nie mówiąc o\_* (*to say nothing of \_*, *let alone\_*), *nie wspominając o\_* (*not to mention\_*), *nie wytykając\_* (*not to mention names*), *nie licząc* (*besides*), *nie ukrywając* (*not denying*) etc.

A similar process of the gradual change of converbs into separate lexical units was the subject of the analysis in Kortman & König (1992), Ramat (1992), Brinton & Traugott (2005), Brinton (2012) (mostly in German and Romance languages). In Polish, the problem was addressed by Weiss (2005) who identified and described Polish conjunctions, prepositions and adverbs of converbial origin, as the result of the degrammaticalization and lexicalization processes (van der Auwera (2002).

However, it is Birzer who drew attention to Russian and Polish DSE of converbial origin (c.f. Birzer 2015: Russian *voobščę govorja* and Polish *ogólnie mówiąc* – *generally speaking*, Birzer 2017a,b) as the result of pragmaticalization process interpreted as grammaticalization of discourse functions (Diewald 2011). Nevertheless, the development of DSE consisting of negation exponent *nie* and expression homographic with a converb has not been scrutinized yet.

The list of expressions being the subject of the further research was excerpt in 3 steps: (1) literature review, i.a. Weiss (1975, 2005), Bogusławski, Wawrzyńczyk (1993), Bogusławski, Danielewiczowa (2005), Moroz (2010), selected dictionaries of contemporary Polish (ISJP, USJP, WSJP); (2) formulation of the hypotheses for the semantic-syntactic features of matrix verbs (regularity in valency patterns cf. valency dictionaries: SGSCzP, Walenty; shared semantic components), (3) further verification of the list using text corpora (NKJP, Spokes) accompanied by manual inspection of the data.

The objective of the research, conducted with corpus-based qualitative-quantitative analysis, was to determine syntactic changes accompanying the process of pragmaticalization of expressions in question along with indicating semantic features of the matrix verbs. The issue of information structure of the utterance with expressions in question along with prosodic patterns, external and internal word order were also taken into account.

The research showed that only two expressions have their DSE counterparts without negation exponent (e.g. *nie licząc* – *not counting*: *Będzie osiem osób, nie licząc rodziny*. *There will be eight people, not counting the family*. And *Będzie osiem osób, licząc/wliczając Piotra*. *There will be eight people, including Peter*). It also allowed to establish the stage of pragmaticalization of DSE (from construction through expression with generalized conversational implicature to lexical unit; Levinson (1995, 2002), Traugott & Dasher (2002)). Most of them are results of univerbation understood as loss of the ability to open any valency slots; in other cases, valency pattern of DSE is much reduced in comparison to the matrix verb. Whereas some of DSE have the status of lexical units (idioms, e.g. *nie mówiąc o\_* (*to say nothing of \_*, *let alone\_*), *nie wspominając o\_* (*not to mention\_*)) with a component:

'X, saying that he or she will not say p, is actually saying: p', others shall be considered rather as construction with shared generalized conversational implicature which has not been fully coded yet.

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Dictionaries:

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SGSCzP: Polański, Kazimierz (ed.) (1980-1992), *Słownik syntaktyczno-generatywny czasowników polskich*, Wrocław / Kraków: Zakład Narodowy im. Ossolińskich / Instytut Języka Polskiego PAN,.

USJP: Dubisz, Stanisław (ed.) (2003), *Uniwersalny słownik języka polskiego*, Warszawa: PWN.

WSJP: Żmigrodzki, Piotr (ed.) (2007-2019), *Wielki słownik języka polskiego*, Kraków (online: <http://www.wsjp.pl>).

Corpora:

NKJP: Narodowy Korpus Języka Polskiego (National Corpus of Polish: [www.nkjp.pl](http://www.nkjp.pl)): Przepiórkowski, Adam, Bańko, Mirosław, Górski, Robert, Lewandowska-Tomaszczyk Barbara (2012), *Narodowy Korpus Języka Polskiego*, Warszawa.

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Walenty: <http://zil.ipipan.waw.pl/Walenty>: Przepiórkowski Adam, Hajnicz Ewa, Patejuk Agnieszka, Woliński Marcin, Skwarski Filip, Świdziński Marek (2014), Walenty: Towards a comprehensive valence dictionary of Polish, in N. Calzolari et al. (eds.), *Proceedings of the Ninth International Conference on Language Resources and Evaluation, LREC 2014*, Reykjavík, Iceland. European Language Resources Association (ELRA), pp. 2785–2792.

## **Changes in linguistic complexity and the diachrony of anticausatives in Greek**

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Keywords: complexity, language change, anticausatives, Greek, Voice

In the last decades, many common assumptions on language complexity have been questioned or rejected, such as the ‘equi-complexity hypothesis’ (Shosted 2006, Sinnemäki 2008), according to which languages do not differ in their level of complexity but only in the locus of it. Different views and approaches have led to opposing results on the diachronic development of complexity. Some studies approach complexity in terms of processing difficulty (Miestamo 2008); other studies define it from a theory-oriented perspective. Moreover, some researchers support grammatical simplification of language systems diachronically when contact involves second-language transfer (Trudgill 2011), while others observe a tendency for complexification (Nichols 1992, McWhorter 2011). More recently, it was claimed that linguistic complexity must be split into two categories: I[nternal]-

complexity, which is concerned with phenomena pertaining to morphological or syntactic derivation, and E[xternal]-complexity, which is related to frequency of usage (Di Sciullo 2012).

In this study, we examine how different approaches to morphosyntactic complexity lead to different conclusions on the diachronic development of complexity. We propose that I-complexity can be further divided into two subtypes: complexity of derivation (d-I complexity) and parametric complexity (p-I complexity). We investigate the diachrony of voice morphology in Greek, focusing particularly on anticausative verbs, i.e., unaccusatives that can have a causative counterpart. Anticausatives, which are attested in Ancient Greek only with non-active (middle-passive) morphology, can be found in Modern Greek with either active (Ex. 1a) or non-active morphology (Ex. 1b) or with both (Ex. 1c).

- (1) a. *To parathiro anikse apo ton aera.*  
 ART.NOM window:NOM opened:ACT.3SG by ART.ACC wind:ACC  
 ‘lit.: The window was opened by the wind.’
- b. *I tenda skistike apo ton aera.*  
 ART.NOM tent.NOM got-torn:NACT.3SG by ART.ACC wind:ACC  
 ‘lit.: The tent got torn by the wind.’
- c. *To bluzaki lerose/ lerothike apo ton idhrota.*  
 ART.NOM T-shirt:NOM got-dirty:ACT/ NACT.3SG by ART.ACC sweat:ACC  
 ‘lit.: The T-shirt got dirty from sweat.’

The preference of anticausative verbs for active morphology in later periods of Greek can be analyzed as simplification, in terms of d-I complexity, because the same verbal (labile) form is used in the transitive/ causative and the intransitive/ anticausative construction and there is no need for Voice projection (according to a syntactic analysis of lability). P-I complexity, on the other hand, increases because of a “microparameter” that determines the lexically constrained class of active anticausatives. In terms of E-complexity, however, the above parameter becomes increasingly less complex because of its higher frequency (the high frequency of usage of the lexically constrained class of active anticausatives).

We further devise simple metrics to estimate all types of complexity mentioned above in relation to the development of Greek anticausatives. Our aim is to show how all different types of complexity relate to each other and what conclusions about the diachronic development of Voice in Greek can be drawn from their combination. We call this combined complexity “dynamic complexity,” and we hypothesize that tendencies found in any type of complexity are balanced out when all other types are taken into account.

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## **Durational rhythmic variability of Persian between-sentence**

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**Keywords:** speech rhythm, durational variability, rhythmic measures, between-speaker, between-sentence

Eight decades' scientific study of speech rhythm proves that it is not only an important part of music and poetry but also is a controversial topic in almost all branches of linguistics. In this way, acoustic studying of speech rhythm substantiates applicable results in various issues such as speaker identification (Dellwo, Leemann, and Kolly 2012; Leeman, Kolly, and Dellwo 2014). Some studies indicated that speech rhythm is highly variable between languages, dialects, and speakers (Dellwo 2010, Wiget et al., 2010; Arvintini 2012, Asadi et al., 2018, Taghva, Moloodi, and Abolhasanizadeh 2020). Moreover, they concluded that between-speaker variability on speech rhythm depends on the linguistic variables in the sentences.

In this study, we investigate the effect of each sentence in the rhythmic features of speakers of the same language. Therefore, we considered the rhythmic variability of Persian between-sentence through durational measures of speech rhythm. We asked ten native speakers (five men and five women, aged 20-40) of Contemporary Standard Persian language to read "The north wind and the sun" story in the acoustic room of Shiraz University. This story contains 7 complicated sentences in its Persian version. So, the dataset of this study comprised 70 tokens (10 speakers  $\times$  7 sentences). For each sentence 6 tiers of TextGrids were made in Praat, version 6.1.41. We determined the accurate duration of different phonetic intervals as follows:

	segmental duration in the first tier	-
	the vowels and consonants intervals in the second tier	-
vowel and consonants intervals based on the number of consonants and vowels in the third tier		-
	the vocalic and consonantal intervals in the fourth tier	-
	syllable intervals in the fifth tier	-

Finally, in the sixth tier, the syllable's peak was automatically identified according to the principle of sonority by a script written by Dellwo (<https://www.cl.uzh.ch/de/people/team/phonetics/vdellw.html>). Afterward, we calculated the 75 speech durational rhythmic measures through the script written by Dellwo. These measures were extracted from previous works (Ramus et al., 1999; White and Mattis, 2007; Grabe and Low, 2002; Dellwo, 2010; Tilsen and Arvintini, 2013; Dellwo et al., 2012; Dellwo, Leemann, and Kolly 2015). Thereafter, the Pearson correlation analysis was employed in SPSS to select the least correlated measures. Then, the selected measures, including rateSyl (the rate of syllable intervals), varcoC (the standard deviation of the normalized rate of consonantal intervals), %V (the proportion over which speech is vocalic), nPVI\_V (rate-normalized averaged durational differences between consecutive vocalic intervals), nPVI\_CV (rate-normalized averaged durational differences between consecutive consonantal-vocalic intervals),  $\Delta$ Con (the standard deviation of consonant intervals),  $\Delta$ PeakLn (the normalized standard deviation of syllables' peak intervals), were analyzed by

the one-way ANOVA test to arbitrate the most efficient between-sentence rhythmic durational measures. The result of this test indicated that although all seven considered measures are statistically significant, VarcoC (F-value=9.319) is the most efficient measure to show between-sentence variability in Persian. Thus, the normalized Standard Deviation of C intervals is the most useful measures in segregating Persian between-sentence.

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### **Surprisal and information structure of human referents across syntactic roles: evidence from European languages**

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The impact of information structure on word order has been an important topic in typology (Givón 1988, Gundel 1988, Herring 1990, Payne 1990). Two general principles are:

- *“Given Before New (GBN) Principle*  
State what is given before what is new in relation to it.
- *First Things First (FTF) Principle*  
Provide the most important information first.” Gundel (1988: 229)

These two principles compete for established topics and are resolved through syntactic constructions that manipulate word order, as in the following sentences from Carrol’s *Alice in Wonderland*:

- 1) *There was the Cat again, sitting on a branch of a tree.* (most important information first)
- 2) The Cat only grinned when it saw Alice. (stating what is given before what is new)
- 3)

We want to investigate the importance of the *GBN Principle* considering human and human-like referents, using a massive parallel corpus (Talamo and Verkerk, *submitted*) and surprisal, an information-theoretic measure. Surprisal (Shannon, 1948) measures “predictability in context” (Hale 2001, Levy 2008), quantifying how informative a word is given its preceding context. Comparing 1) and 2), *Cat* is highly unpredictable given *There was*, while it is more predictable after *only grinned*. Dealing with predictability, surprisal is a good match to quantitatively assess given vs. new information.

Referents occurring as subjects encode a high degree of accessibility, whereas less accessible referents and new referents typically occur as objects or in other syntactic functions (Ariel, 1990; Grosz et al., 1995; Prince, 1981 and others). We focus on subjects and indirect/direct objects of transitive and ditransitive verbs. The dataset features the originals and translations of 18 novels in a balanced sample of 18 European languages (from Celtic, Balto-Slavic, Germanic, Greek, and Romance, see anonymizedRef). Hence, the nominal referents under investigation are third personal pronouns and names of human and anthropomorphic beings from these novels. While all languages of the sample are ‘basic’ subject-first languages, they show interesting variation regarding both information structure and word order, impacting our results: a) Irish and Welsh are verb-initial, see Herring (1990); Payne (1990); b) Modern Greek has relatively free word order of core participants (Lascaratou 1998), c) Greek, several Romance and Balto-Slavic languages are pro-drop, and d) all languages vary their object-fronting constructions. Taken together, we hypothesize a relation between surprisal and *GBN principle* along the following points:

- For proper nouns:  
H1: sentence-initial subjects have lower surprisal than not-sentence-initial objects; H2: sentence-initial objects have higher surprisal than not-sentence-initial subjects;
- For personal pronouns:  
H3: lower surprisal of subject pronouns than of object pronouns, regardless of sentence position, in non-prodrop languages;
- H4: overall higher surprisal of personal pronouns in pro-drop languages than non-pro-drop languages.
- 

Preliminary results suggest that while H1 is true, the effect of H2 is much more pronounced (i.e. fronted objects are highly marked in terms of surprisal), the effect of H4 is highly language-individual, with Italian having the highest surprisal out of the Romance languages, H3 is borne out as well. We additionally find proper nouns to have lower surprisal in pro-drop languages. This study shows the

complex interplay between word order, syntax, and information structure from an information-theoretic perspective.

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## The expression of motion speed in a morphologically rich language

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Keywords: motion events, motion verbs, speed expressions, corpus analysis, Estonian

**Introduction.** All motion events can be characterised by means of the relation between space and time, i.e. speed. Although a central property of motion, this feature of motion – speed – is only rarely discussed in the otherwise rich typological literature on motion events (for some rare examples, see Lindsay et al. 2013; Speed & Vigliocco 2013). Consequently, relatively little is known about the linguistic means used across languages for expressing speed, and how it interacts with the lexicalisation patterns proposed by Talmy (1985, 2000). According to Talmy, languages can be roughly divided into two main types based on the expression of Path in that verb-framed languages express Path in the main verb (e.g. Spanish) and satellite-framed languages express Path in a

morpheme associated with the verb (e.g. English). The latter languages are typically manner-rich in that they extensively use manner verbs and have a more elaborated manner verb lexicon (Slobin 1996). As speed is a type of manner (Cardini 2008, Stosic 2019) that is particularly relevant to motion (Ikegami 1969; Slobin et al. 2014), we address the structure of motion descriptions in a satellite-framed language focusing on the expression of this particular dimension of manner.

**Aim and research questions.** The main aim of the study is to examine the linguistic inventory of speed-related expressions in Estonian, a satellite-framed and morphologically rich language. In addition, we aim to determine any linguistic differences (if any) in expressing fast vs. slow motion.

**Data and method.** We use corpus data of written Estonian consisting of 12,300 clauses and taken from the Estonian National Corpus 2019. To draw the data from the corpus, 41 Estonian motion verbs were used. With each of the verb, 300 clauses of actual motion were randomly selected. Each verb was assigned a lexically specified speed estimation from an earlier rating task (Taremaa 2017). For example, *lonkima* ‘stroll’ expresses very slow, and *kihutama* ‘dash’ extremely fast motion. The clauses were then coded for i) the presence and meaning of manner modifiers (including speed) and ii) the morphosyntactic form of manner modifiers.

**Results.** Approximately 20% of the total of 12,300 clauses contain a manner modifier. Of these, 15% (N=400) are speed modifiers (e.g. *kiiresti* ‘fast’). Furthermore, verbs of fast motion combine more frequently with speed modifiers than verbs of slow motion and the majority of the speed modifiers (80%) express fast motion. Also, verbs of fast motion tend to co-occur with the modifiers of fast motion (e.g. *kiirustas kiiresti* ‘(s)he hurried fast’), whereas verbs of slow motion tend to co-occur with the modifiers of slow motion (e.g. *lonkis aeglaselt* ‘(s)he was strolling slowly’). Based on quantitative and qualitative analyses, we explore the function of manner modifiers and show that the two main functions of the speed modifiers are to specify the exact speed of motion and to intensify speed-related meaning conveyed by the main verb. Drawing on these results, we put forward a *fast-over-slow* motion principle suggesting that fast motion attracts speakers’ attention more than slow motion when describing motion events.

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## Perspective shift in reported discourse of Finno-Ugric languages

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Keywords: perspective shift, reported discourse, dichotomy ‘direct – indirect reported discourse’, Finno-Ugric

In colloquial speech of Finno-Ugric (FU) languages, reported discourse (RD) constructions allow the combination of elements pertaining either to the narrated (E<sup>n</sup>) or speech (E<sup>s</sup>) event (Jakobson 1971: 133). Such cases deviate from the classic dichotomy ‘direct – indirect RD’ and can be qualified as ‘mixed’. For instance, in (1), the past tense in E<sup>s</sup> does not affect the choice of tense in E<sup>n</sup> (‘he **said**, his cousin lives’, not ‘he **said**, his cousin **lived**’), while personal (‘**his** cousin’) and spatial (‘here’) indexicals pertain to E<sup>s</sup> and depict the reporter’s perspective. A similar situation is observed in self-quotations (2), in general depicting the reporter’s perspective but with the temporal persistence to E<sup>n</sup> (‘I **will** become’, not ‘I **would/have** become’). In contrast, when the reported speaker’s perspective prevails, tense and other deictics pertain to E<sup>n</sup> (3).

(1) Finnish (Finnic)

(...*sanoi et asun äänekoskel ja*)

<i>se</i>	<i>sanoi</i>	<i>et</i>	<i>sen</i>	<i>serkku asuu</i>	<i>tääl</i>	<i>ja</i>
DEM.D	say.PST.3SG	COMP	DEM.D.GEN	cousin live.PRS.3SG	here	and
<i>sanoi</i>	<i>et</i>	<i>se</i>	<i>tulee</i>	<i>joskus</i>	<i>käymään</i>	<i>tääl...</i>
say.PST.3SG	COMP	DEM.D	come.PRS.3SG	sometimes	visit.INF.ILL	here

‘(...I said that I live in Äänekoski and) he said that his cousin lived here and he would sometimes come here to visit...’ [korp.scs.fi, Suomi24]

(2) Udmurt (Permic)

<i>Mon</i>	<i>ne</i>	<i>ožidal,</i>	<i>čto</i>	<i>mon</i>	<i>vožatoj</i>	<i>luo</i>	<i>šuysa.</i>
1SG	{NEG}	{expect.PST.M}	COMP	1SG	group.leader	be.FUT.1SG	COMP

‘I didn’t expect that I will become a group leader.’ [UdSmC]

(3) Hungarian (Ugric)

<i>Várjál –</i>	<i>aszongya –</i>	<i>felhívom</i>	<i>az</i>
wait.IMP2SG	QV.PRS.3SG.DEF	call.up.PRS.1SG.DEF	

ofőmet és megkérdezem.  
head.of.department.1SG.ACC and PRF.ask.PRS.1SG

‘Wait – she said – I’ll call the head of my department and ask.’ [MNSz]

This study investigates the behavior of tense, mood, personal pronouns, temporal & spatial deictics in RD-constructions. Different RD-constructions (reported speech & thought, quotations & self-quotations) are checked, and categories that shift in RD are listed. In addition, we check for cases of *perspective persistence*, i.e. maintenance of the reported speaker’s personal, spatial and temporal perspective, although a shift can be signaled grammatically (Munro *et al.* 2012: 44; Gentens *et al.* 2019). The aims are to (i) provide a list of indexically sensitive elements in RD-constructions and (ii) clarify what categories systematically underline the reporter’s and the reported speaker’s perspective or allow the combination thereof (see e.g. Deal 2019; Knyazev, m.s.).

To reach the aims, we carry out a qualitative study on 7 FU languages (Hungarian, Estonian, Finnish, Mari, Komi, Udmurt & Erzya) representing 3 linguistic areas (Central & Northeastern Europe, and Russia). The study is corpus-based. Frequently used quotative strategies (see overviews in Teptiuk 2019, 2020) are selected as a query. At least, 4 different strategies per language with a minimum amount of 100 examples per strategy are investigated in social media corpora available online. The choice of data is motivated by the consideration that non-standard written texts as a written approximation of spoken language often deviate from the dichotomy ‘direct – indirect RD’. Hence, these data allow investigating phenomena absent in standard writing and official speech contexts.

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## Constructional variation: A cross-linguistic comparison

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Keywords: Constructional variation, Complex predicates, Construction Grammar, Cross-linguistic comparison, Romance languages

We bring to debate a theme that has not been much explored in constructionist approach: constructional variation of complex predicates triggered for conceptualization of visual perception in Romance languages: Portuguese (Brazilian, European and Mozambican varieties; henceforth, BP, EP and MP) and French. Examples:

- (1) Fui **dar uma olhada** numa aula de odonto que apareceu no meu Stream. [BP, Twitter]  
I went to *take a look* at a dental class that appeared on my Stream. [Twitter, our translation]
- (2) Muitas mulheres entram em lojas de roupa não com o intuito final de comprar roupa, mas apenas para **dar uma vista de olhos** à coleção. [EP, Diário de Notícias]  
Many women enter clothing stores not with the final intention of buying clothing, but only to *take a look* at the collection. [Online newspaper Diário de Notícias, our translation]
- (3) Vamos **dar uma olhadela** às músicas latinas que estão a fazer sucesso neste Verão. [MP, VOA]  
Let's *take a look* at the Latin songs that are making a splash this summer. [Online newspaper VOA Português, our translation]
- (4) N'hésitez pas à **jeter un coup d'oeil** à nos autres produits.  
Do not hesitate to *take a look* at our other products. [FrenchWeb2017, our translation]

In light of a new theoretical-methodological alignment of the Variationist Sociolinguistic and Construction Grammar with Functional-Cognitive Linguistics, based on Weinreich, Labov & Herzog (1968), Goldberg (1995, 2006), Cappelle (2006, 2009), Hilpert (2014), Perek (2015), Traugott & Trousdale (2013), we compare and describe the main formal and functional aspects of these constructions, examined for schematicity, productivity, compositionality and contextuality. We aim to discuss these issues: Are there differences regarding use and meaning in Portuguese and French? What is the place of variation in the representation of constructional network with support verb? Are there constructions that are varying through coexistence or competition, as well due polysemy or similarity? What are the motivations for variation? What are the constraints? Evidence in BP data analysis (Travassos, 2019) shows that a conventionalization of intersubjective sense is underway, overlapping the non-durational aspectual value: it tends to appear as indices of an attitude of politeness and care towards the interlocutor in conceptualizing the state of affairs (Brown & Levinson, 1987 and Goffman, 1967). We argue for these values are also updated in other varieties of Portuguese and French. The corpora are from digital domain (Twitter, collected data via Rstudio software, Sketch Engine – PortugueseWeb2011 corpus and FrenchWeb2017 corpus – and online newspapers), written sources, from the current synchrony. We rely on collostructional methodology and on multiple logistic regression analysis. We hypothesized that verb-nominal periphrases reveal not only polysemy, but also similarity (Travassos and Machado Vieira, 2020), through association links due cognitive processes, such as analogy and entrenchment. Portuguese (the three analysed varieties) and French converge on the use of the construction with support verb resource to conceptualize visual perception. Brazilian Portuguese and European Portuguese diverge, statistically, in terms of the preferred construction to express the function at stake: “dar uma olhadela” in EP and “dar uma olhada/olhadinha” in PB.

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## **Negation Raising as a Semi-Performative Operation. Corpus Evidence from Polish and German**

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Keywords: Negation Raising, Performatives, Corpus Evidence, Polish, German

It is known that with certain verbs (such as *think* or *believe*), a negation in the matrix clause can be understood as negating the embedded proposition. Such verbs are referred to as negation raising predicates (NR predicates) and are attested in many languages (Fillmore 1963, Bartsch 1973, Horn

1978, Gajewski 2007). Among many different approaches to Neg-Raising, the idea put forward by Prince (1976) is particularly interesting, since it explains a range of data which is difficult to account for within other, especially syntactic approaches. Prince (1976) observed that NR predicates exhibit a marked preference to the first person present non-progressive form (in English) and in this regard, they behave in a way similar to performatives. In this paper, the performativity hypothesis is tested using corpus data based on evidence from Polish and German.

The distribution of the negated NR predicates *sądzić* ‘think’ and *wierzyć* ‘believe’ in Polish (Modrzejewska 1981) was examined in the balanced version of the National Corpus of Polish (Przepiórkowski et al. 2012). The negated verbs *sądzić* and *wierzyć* exhibit two selectional patterns: They can select indicative complement clauses introduced by the complementizer *że* ‘that’ and subjunctive complement clauses introduced by the complementizer *żeby*. In contrast to sentences with *że*, where affirmative structures are possible, sentences with *żeby* obligatorily contain a negation in the matrix clause. Affirmative structures are excluded with *żeby*. However, the matrix negation in sentences with *żeby* can still be understood as negating the embedded proposition. The presence of a semantic negation in embedded *żeby*-clauses is evidenced, among others, by (strong) Negative Polarity Items, which can be licensed within these clauses. Similar patterns can be observed in French. According to Prince (1976), French sentences with NR reading contain embedded clauses in the subjunctive rather than the indicative mood. This seems also to hold for Polish.

Based on the above observations and assuming the performativity hypothesis, the preference for the first person present form of NR predicates such as *sądzić* and *wierzyć* is expected to be stronger with *żeby*-clauses than with *że*-clauses. This is indeed evidenced by the corpus data. In particular, the results of the present corpus study show that the tense and person form of the negated verbs *sądzić* and *wierzyć* correlate with their preferences for *że*- versus *żeby*-complements. The first person present form is associated with *żeby*-clauses significantly stronger than with *że*-clauses. These findings clearly support the performativity hypothesis.

Pilot studies of the corresponding NR predicates in German, *denken* ‘think’ and *glauben* ‘believe’, using the German part of parallel corpus InterCorp v13 (Čermák and Rosen 2012), yielded very similar results. The occurrence of negation in the matrix clause is strongly associated with the first person singular present form. The correlation between the occurrence of negation, the form of the NR predicate and the mood of the embedded clause (indicative versus conjunctive, both introduced by the complementizer *dass* ‘that’ in German) remains to be explored on the basis of large data, as provided for instance by the German Reference Corpus (Kupietz et al. 2018).

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## **Cross modality in audition: Descriptions and experience ratings of everyday acousmatic sounds**

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Keywords: sensory perception, everyday sounds, cross modality, adjectives, nominals

Previous work on sound events has shown that descriptions of sound are highly cross modal (Caballero & Paradis, 2020). The sensory domain of sound is often directly linked to sensory meanings of words which may primarily be associated with senses other than audition, such as sight in *bright sound* or touch in *rough sound* (Winter, 2019, p.3; p.72). This study approaches the problem of sensory representation through language by probing into participants' experiences through their descriptions and ratings of everyday acousmatic sounds, i.e., sounds without corresponding visual input. We explore to what extent sensory-motor experiences, other than hearing, are activated to support the processing of the auditory input and to what extent such experiences are drawn upon in language use as evidenced by ADJ+NOUN pairings. Three questions are at the core of the study.

1. What types of ADJ+NOUN pairings do the participants use to describe everyday sounds?
2. To what extent do these pairings evoke cross-modal meanings?
3. With regard to cross-modal experiences, are the participants' ratings in agreement or disagreement with their written responses?

We conducted a survey, which was completed by 214 participants, all native speakers of English above 18 years of age. The survey consisted of 20 recordings of everyday sounds, including ambient sounds such as traffic in a busy street and more specific sounds such as somebody eating an apple. We asked participants to describe each sound in detail and to rate their experiences of the sounds on five-point scales. In this presentation, we explore responses and ratings for six out of the 20 sounds included in the survey. These six sounds are the sounds of eating an apple, drinking tea, moving in water, walking on stairs indoors, walking on gravel, and the sound of a fireplace, a total of 1,157 written responses (5,356 words in total). For the analysis we launched five couplings of variables: inside/outside the body, direct/less direct contact with external sound effectors, synchronous/asynchronous body movement, all/some senses involved in the events, and indoor/outdoor settings: the following are examples of participants' descriptions of different length and of different sounds.

- Crackling fire
- The sound of somebody washing small laundry items in an orange plastic bucket.

We focused on the sound types in relation to the distribution of meanings of ADJ+NOUN pairings described by the participants. Via manual annotation we identified 865 ADJ+NOUN pairings, which we classified on the basis of their meaning(s) in context into the subsequent eight sensory systems: the visual, auditory, olfactory, gustatory, tactile, vestibular, proprioception and interoceptive systems. Our

findings were then compared to the participants' ratings of their sensory experiences of the six sounds. While the participants' written descriptions yielded data rich in similarities in how the sounds were described, these descriptions did not necessarily correspond to their cross-modality ratings afterwards. The exploration of such descriptions and assessments of experiences is essential to gain insights about the relationship between the sensory domain of sound and language.

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## An alternative to generalized linear models: Markov models for multi-state language change

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**Keywords:** markov models, survival analysis, competing risks, illness-death model, preterits

The main workhorse in quantitative diachronic corpus-based linguistics today is generalized linear models, with time as an explanatory variable, often under multivariate control or in interaction with other covariates (see, a.o., Gries & Hilpert 2010; Rosemeyer 2014; Wolk et al. 2013; De Cuypere 2015; Fonteyn & Van de Pol 2016; Zimmermann 2017; Petré & Van de Velde 2018). This procedure is not always the most judicious approach, however: “[T]he fact that time is a dynamic process provides challenges in formulating a model that are not present in settings where a typical linear or logistic regression model might be applied.” (Hosmer et al. 2008: 2). One of the problems is that time series often display autocorrelation, where consecutive time periods are not completely independent from one another, which can increase what in statistics is called Type I errors, by underestimating the standard error of the time variable (Cowpertwait and Metcalfe 2009: 96 and Kopleinig & Müller-Spitzer 2016; Kopleinig 2017; Van de Velde & Petré 2020 on linguistic applications). This can be solved in various ways within the framework of generalized linear models (see Baayen & Milin 2010 and De Smet & Van de Velde 2020), but other problems remain. Generalized linear models often assume a transition, rather than a wavering back-and-forth movement of competing variants. Some time intervals may be under-attested in the corpus, making it hard to see what is happening in these dark spots. Generalized linear models often assume a smoothed transition.

We offer an alternative. For a multi-state language change, we propose a Markov model in continuous time. The major advantage of this technique, which has been used in medical contexts, is that it is especially geared towards dealing with time as a variable of interest, while it still allows one to look at the effect of several covariates. The mathematical foundations have already been laid out by Krylov (1995), but so far, it has, to our knowledge, not been applied to a real-life dataset in linguistics.

In our study (see also Van de Velde & De Smet 2021), we look at morphological shifts in preterits in Dutch, from 800AD to 2000AD (n = 14314). Ignoring the competition from the analytic perfect, Dutch, like other Germanic languages, disposes of two inflectional preterits, the strong inflection (operating with Ablaut, e.g. *rijden-reed* ‘drive-drove’) and the weak inflection (operating with a dental suffix, e.g. *spelen-speelde* ‘play-played’). This is a well-researched field, allowing us to investigate the performance of the multi-state Markov model. We looked at the transition between strong and weak forms, and built a so-called ‘competing risks illness-death model’, in which verbs can transition from strong to weak or vice versa (see Cuskley et al. 2014), or can be lexically phased out (lexical death). Our results show that the Markov Model brings out the effects of frequency and ablaut-pattern, and can be used for predictions.

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## Balto-Slavic connective negation and negative concord

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Keywords: negation, connective negation, negative concord, Balto-Slavic, indefiniteness

The last quarter century saw an upsurge of cross-linguistic research on ‘negative concord’ (‘NC’). It focused on the conditions for expressing a single clausal negation by both a clausal negator (like **n’t**) and a negative indefinite pronoun (like *nothing*) and, to a lesser extent, on the combination of a clausal negator and a negative indefinite noun phrase (like *no education*).

- (1) a. You **ain’t** seen *nothing* yet.                      b. We **don’t** need *no education*.

Little attention (cf. van der Auwera in print) went to cases in which the clausal negator combines with connective negators (‘neither ... nor’), as with Croatian *ni ... ni* in (2) and Ukrainian *ani ... ani* in (3).

- (2) *Ni Sofija ni Lea nisu* išle u školu.                      ‘Neither Sofija nor Lea went to school.’  
(3) *Vin ani ne tancuje ani ne* spivaje.                      ‘He is neither dancing nor singing.’

Most remarkably, indefiniteness is irrelevant here: the nouns *Sofija* and *Lea* in (2) are definite, and the finite verbs *tancuje* and *spivaje* are neither definite nor indefinite.

The main question is: if we know how a language behaves for NC with negative indefinites, do we also know how it behaves for NC with negatively connected phrases? The answer is that we don’t. Thus Croatian has strict NC for indefinites. We expect the clausal negator in *nisu* to be obligatory, which is true, but nothing prepares us for the fact that the first connective negator (*ni*) is optional when it is preverbal. Ukrainian has strict NC for indefinites as well. But, again, this predicts neither that the first connective negator is optional nor that the clausal negators may be absent when both connective negators are present.

Based on grammars and questionnaires, we investigated the parameters of variation for 15 Balto-Slavic languages, all of which have strict NC for indefinites but which differ greatly when combined with connective negators.

1 / The most important parameter proves to be the distinction between the connective negation of finite verbs (as in 3), other constituents (as in 2), and clauses (as in 4 from Lithuanian).

- (4) *Nei*    *aš*                    *jam*                    *patinku*                    *nei*    *jis*  
CONEG 1.SG.NOM    3.SG.DAT like.PRS.IMPF.1.SG CONEG    3.SG.NOM  
*man*                    *patinka*.  
1.SG.DAT    like.PRS.IMPF.3.SG  
'He does not like me and neither do I like him.'

2 / A second parameter, harking back to 'classical' NC studies, is whether or not the connective negators are preverbal or postverbal.

3 / A third parameter, rather unexpectedly, is whether the connective negators which are not accompanied by clausal negators license negative indefinites. Croatian *niti* in (5), for instance, can't do it.

- (5) *Niti*    *je*                                    \**nikoga*                    / *ikoga*                    / *nekoga*  
CONEG be.IND.PRS.3.SG nobody.ACC / anybody.ACC / somebody.ACC  
*vidio*,                                    *niti*                    *ga*                    *je*                                    *djevojka*  
see.PTCP.PST.SG.M CONEG    3.SG.ACC.M    be.IND.PRS.3.SG girl.NOM.SG  
*upozorila*.  
warn.PTCP.PST.SG.F  
'He neither saw anybody/somebody nor did the girl warn him.'

## References

van der Auwera, Johan (in print), Quirky negative concord: Croatian, Spanish and French *ni*'s, *Jezikoslovlje*

## Where alienability accounts fall short: Bound nouns in Harakmbut

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Keywords: alienability, noun classes, adnominal possession, Harakmbut, Amazonian languages

This paper investigates to what extent the notion of alienability can account for the distinct behaviour of sets of nouns in the underdescribed language Harakmbut, more specifically the Arakmbut (Amarakaeri) dialect, spoken in Peru. Harakmbut is still considered as an unclassified (Amazonian) language (cf. Wise 1999: 307; WALS), although Adelaar (2000) has argued for a genetic link with the Brazilian Katukina family, which may be further linked to Macro-Jê. It is based on first-hand data recorded both in the field and – due to the Covid-19 pandemic – at a distance.

The starting point of this paper is the morphological distinction between independent and bound nouns. Unlike independent nouns, bound nouns require a noun prefix to obtain independent nominal status (*wa-* or *e-*), cf. (1a) and refer to inalienably possessed entities, such as body parts, plant parts, and landscape parts, as well as kinship terms and basic shapes or qualities of entities. These classes are sometimes called obligatorily vs. non-obligatorily possessed nouns, or inalienable vs. alienable nouns, and they are ubiquitous in Amazonian languages (Krasnoukhova 2012: ch. 8). It will be shown that in Harakmbut, bound nouns behave differently from independent nouns in the areas of noun incorporation, N-N compounds and adnominal modification. In the latter domain, for example, bound

nouns may phonologically fuse with a preceding modifier, such as an interrogative (1b), possessive (1c) or demonstrative modifier, unlike independent nouns.

- (1) (a) *wa-ndik*  
NPF-name  
'name'
- (b) *kate-ndik*      *ĩʔ-ẽ-Ø?*  
what-name      2SG-be-DUB  
'What is your name?'
- (c) *ndoʔ-edn-ndik*  
1SG-GEN-name  
'my name'

However, this construal involving fusion is not available to bound kinship terms; 'my sister' in (2) is expressed differently from 'my name' (1c), but identically to 'my pot' in (3) (apart from the noun prefix), i.e. with the possessor and possessee forming distinct words. Note that both (1c) and (2) involve inalienable possession, whereas (3) involves alienable possession (that is, pots can easily shift possessors, while names and sisters cannot) (cf. Nichols 1988).

- (2) *ndoʔ-edn*      *wa-mambuy*  
1SG-GEN      NPF-same.sex.sibling  
'my sister (of female ego)'
- (3) *ndoʔ-edn*      *kōsō*  
1SG-GEN      pot  
'my pot'

In addition, in adnominal possession constructions with body-part nouns, alienability cannot fully account for the observed variation either. That is, while 'severed' body parts are – predictably – construed identically to constructions with independent possessee nouns like (3), 'in-situ' body parts are found in both constructions, cf. (4). In fact, 'my name' in (1c) can also be construed like (2) and (4a).

- (4) (a) *Rosa-edn*      *wa-ku-wih*  
Rosa-GEN      NPF-head-hair  
'Rosa's hair, cut off' OR 'Rosa's hair, still on her head'
- (b) *Rosa-edn-ku-wih*  
Rosa-GEN-head-hair  
'Rosa's hair, still on her head'

In conclusion, this paper will look at bound nouns beyond the appearance of a noun prefix, and lay bare the distinct morphosyntactic behaviour of (sets of) bound nouns in various grammatical environments – at times they pattern just like independent nouns do. As the noun prefixes *wa-* and *e-* are also used in verb-based nominalization, these forms will also be included in the study.

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## **Using the body to quote across languages and modalities: a comparative pilot study on enactment and utterance reports in LSFb and Belgian French**

Sébastien Vandenitte

Research on quotation in spoken languages has highlighted that reported speech frequently co-occurs with enactment. Indeed, speakers often use their voice, gaze direction, facial expression, head and torso movements to gesturally depict the speaker whose speech is reported (Bavelas et al., 2014; Park, 2009; Stec et al., 2015). Enactment has been described as the default way to report an utterance in sign languages (Cormier et al., 2015; Herrmann & Steinbach, 2012; Quer, 2011).

Despite the paucity of comparative work on the topic, quotations in sign languages are often assumed to exhibit enactment more frequently than in spoken languages. There have also been proposals that signed quotations rely on a more conventionalized and restrained set of bodily articulators for enactment: gaze, facial expression, head and torso (Herrmann & Steinbach, 2012; Quer, 2011). These assumed cross-modal differences in utterance reporting have been paired with claims that the distinct patterns of signed enactment in quotations result from a grammaticalization process in sign languages (e.g., Herrmann & Steinbach, 2012). Alternatively, others have argued that enactment in sign languages essentially relies on depiction, in a way similar to speakers' enactment practices (e.g., Hodge & Cormier, 2019). Cross-modal diversity in the use of enactment could then be explained differently, such as by a cultural difference in the importance of storytelling (e.g., Earis & Cormier, 2013).

The present work addresses the issue in a pilot study looking at a sign language, LSFb (French Belgian Sign Language), and its ambient spoken language, Belgian French, based on two directly comparable filmed corpora: the LSFb Corpus and the FRAPÉ Corpus (Meurant, 2015; Meurant et al., in preparation). Utterance reports were identified and analyzed using the video annotation software ELAN (Crasborn & Sloetjes, 2008). In particular, for each quotation, presence of enactment and, more specifically, the use of the following bodily articulators was annotated: gaze, face, head, torso, hands and/or arms, feet and/or legs. The analysis is carried out on a dataset made up of the dyadic interactions of four LSFb signers and four French speakers. They participate in two linguistic tasks: a conversation about language attitudes and a narrative retelling task.

The results show that, in both languages, quotations frequently co-occur with enactment. Utterance reports however seem to be more frequent in LSFb than French and the two languages show some differences in the articulators which are used for quotational enactment. Different interpretations of these results are discussed and potential fruitful avenues for future research are suggested. This work adds to research in the field of comparative semiotics, linguistics and gesture studies. More specifically, it contributes to the study of the multimodal nature of quotation by directly comparing a sign language with the gestures produced by speakers of its ambient spoken language.

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## Segment Complexity and Segment Inherent Weight: The Behaviour of Palatality in Portuguese

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Keywords: Phonological weight; Palatality; Complex Segments; Autosegments; Portuguese

### 1. Complex segments

In many world languages, segments that occur as phonetic “singletons” might correspond, at the underlying level, to two or more abstract segments and/or autosegments, as in (1).

#### (1). Phonetic complex segments and their phonological counterpart

Phonetic level

[X]



Lexical representation

[ A ]

X=Phonetic single segment

A, B, ...=Phonological (segmental/autosegmental) co-occurring segments/autosegments

Nasal vowels of Portuguese are an example of this: even though they count as phonetic singletons, they behave, phonologically, as the combination of a lexical vowel *plus* nasality (Mateus & Andrade 2000). Evidence for this is found prosodically: e.g., [V~] behaves as any /VC/ sequence for primary stress assignment (*ibid.*).

In the sense that is considered here, complex segments often result from historical bi-phonemic sequences (as this is the case for Portuguese [V~], generally descending from Latin /VN/(=[VN]) sequences) (Touratier 2005).

## 2. The phonological behaviour of Portuguese palatal consonants

In Portuguese, palatal consonants (/ʃ Λ Σ Z/) share some interesting prosodic properties (see (2)):

- they never occur as the last syllable onset of proparoxytones;
- when found last word phonetic onset, they always attract stress to the preceding syllable, making proparoxytonic stress impossible.

### (2). Palatal consonants as the onset of the last syllable and weigh-/stress-assignment in EP

/ʃ/	/Λ/	/Σ/	/Z/
<i>rebanho</i> ‘herd’	<i>espelho</i> ‘mirror’	<i>fogacho</i> ‘flush’	<i>lampejo</i> ‘flash’
[≥1∇β6ʃυ]	[ιΣ∇π6Λυ]	[φυ∇γαΣυ]	[λ6~∇π6Zυ]
(*[∇≥1β6ʃυ])	(*[∇ιΣπ6Λυ])	(*[∇φυγαΣυ])	(*[∇λ6~π6Zυ])

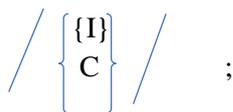
This has motivated Wetzels’ (2000) proposal that Portuguese palatals should be phonologically interpreted as *geminate*s, in view of the argument that penultimates’ filled codas are always heavy, then stressed (Wetzels 2000, 2003, 2007).

In addition, in Portuguese: **(a)** a C-palatal onset is never preceded by a filled Coda (*\*re.bar*.[ʃ]o, *\*espes*.[Λ]o); **(b)** in most Northern varieties of European Portuguese, a C-palatal onset surfaces a preceding coda phonetically filled by the palatal glide [j] (*ba.nho*=[∇βαφʃυ] ‘bath’); **(c)** most instances of Portuguese /ʃ Λ Σ Z/ correspond, diachronically, to Latin {PalatalGlide ∅ Consonant}/{Consonant ∅ PalatalGlide} sequences (e.g., Lat. *milia*>Port. *mi*[Λ]a ‘mile’; Lat. *lin*[j]a>Port. *li*[ʃ]a ‘line’).

## 3. Portuguese palatal consonants as complex segments

Applying the criteria summarised in section 1 with the data presented in section 2, we shall propose that:

- palatality (i.e., {I}, in an Element-Based approach – Schane 1984, Backley 2011) should be added to the autosegmental inventory of Portuguese;
- palatal consonants of Portuguese correspond to what might be seen as “complex segments”, with lexical representations like



- Portuguese palatal consonants bear “inherent weight”;
- Portuguese is a heavy-sensitive language.

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## Alternating pronominal indexing in Kamang

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Keywords: alternating verbs, Timor-Alor-Pantar languages, person indexing, corpus linguistics

Kamang (Alor-Pantar) has several verbal prefix series that index P and patientive S. A third of verbs obligatorily take a fixed series, while the rest alternate between different series and zero (Fedden et al. 2014). Choice of prefix series, while partly determined by lexical class, has been shown to correlate with semantic properties of the verb and its arguments: telicity, volitionality of A or S, and animacy of S or P (Fedden et al. 2013, 2014). These are statistical preferences at the level of the prefix series: for instance, 79% of series I prefixes index animate Ps, while series II favours inanimate Ps (Fedden et al. 2013: 58). Yet, at the level of the verb, the picture is incomplete: animacy-based alternations, shown in (1) for *faafa* ‘search for’, are unproductive (Fedden et al. 2014: 67), and most alternations remain unexplained, e.g., *fal* ‘bind’ in (2), which alternates between zero and a series II prefix despite having the same (inanimate) P.

- (1) a. *ge-dum=a*                      *ga-faafa*                      b. *taweng te-bini*                      *Ø-faafa*  
       3.III-child=SPEC    3.I-search.for                      in.turns CMN.III-lice              Ø-search.for  
       ‘[she] kept looking for the child’                      ‘[they] search for each other’s lice’

- (2)    *ye-wa*            *ga-tang Ø-fal*            *lai=a*            *wo-fal=ak...*  
       3.AL-leg        3.INAL-arm        Ø-bind finish=SPEC    3.II-bind=DEF  
       ‘[we] had tied its hind and front legs together, [we] tied them, ...’

This paper is a quantitative corpus study of the prefix/zero alternation in Kamang natural discourse, building on previous research that drew on video stimulus elicitation data and corpus searches (Fedden et al. 2013, 2014). The current corpus has been enlarged with new narrative data and annotated with the GRAID schema (Grammatical Relations and Animacy in Discourse, Haig & Schnell 2014). The main difference with previous studies that comes to light is the higher rate of zero-marking: 38% of all Ps, compared with 22% reported in prior research (Fedden et al. 2013: 57). In fact, 28% of verb types in the corpus are exclusively zero-marked.

Using the GRAID schema, the present study also considers discourse factors for the first time. The results show that the P index is more likely to be zero when the clause contains an overt independent P argument (pronoun/NP). This would account for the alternation in (2). The effect is not found for S arguments, where the proportion of zero S indexes remains around two thirds with or without an independent S argument (excluding the case of agent pronouns). This indicates a functional difference between S and P prefix alternation: a reference-tracking function may be a competing factor in prefix or zero selection for P, but not for S, which is more strongly conditioned by the semantic factor of patientivity. In this talk, then, we will summarise the insights from the corpus study, showing that prefix/zero alternation of S and P indexes in Kamang involves the complex interplay of semantic, pragmatic and lexical factors.

### Abbreviations

3.I: prefix series I, third person; SPEC: specific; DEF: definite; CMN: common person

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## The peculiar blocking effect in the complement of Mandarin *zi*-verbs

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Keywords: blocking effect, clausal complement, Mandarin *zi*-verbs, reflexivizing operator *zi*-, nonlocal binding

Mandarin has a class of *zi*-verbs that can take a clausal complement (Chief 1997, Y. Liu 2016). These complements may contain further embedded clausal complements. As we see in (1), both *zi-ji* and *ta* are obligatorily bound by the subject of the *zi*-verb. Interestingly, nonlocal binding of *zi-ji* in these

environments is subject to a blocking effect (not noted in Chief 1997), whereas binding of *ta* is not. If we replace *Lisi* in (1) by the 1<sup>st</sup> person pronoun *wo* ‘I’, yielding (2), *Zhangsan* is not available as a binder, and instead *Wangwu* is chosen.

- (1) Zhangsan<sub>i</sub> *zi-yiwei* [Lisi<sub>j</sub> zhidao [Wangwu<sub>k</sub> xinren *zi-ji*<sub>i/\*j/\*k</sub> /*ta*<sub>i/\*j/\*k</sub>\*1]].  
 Zhangsan REFL-think Lisi know Wangwu trust REFL-self/ him/her/it  
 ‘Zhangsan thinks that Lisi knows that Wangwu trusts him.’
- (2) Zhangsan<sub>i</sub> *zi-yiwei* [Wo<sub>j</sub> zhidao [Wangwu<sub>k</sub> xinren *zi-ji*<sub>i/\*j/k</sub>]].  
 Zhangsan REFL-think I know Wangwu trust REFL-self  
 ‘Zhangsan thinks that I know that Wangwu trusts himself.’  
 (Reuland, Wong, and Everaert 2020)

The question, then, is: How to account for the fact that a blocking effect arises inside the complement of *zi*-verbs?

In contrast to the dominant position (Battistella 1989, Cole, Hermon, and Sung 1990, among many others), *zi-ji* is complex, consisting of a reflexivizing element *zi-* and a deficient pronominal *-ji* (Reuland, Wong, and Everaert 2020). According to Giblin (2016), in other contexts binding of *zi-ji* is effected by the matrix  $C^0$  probing for a [+Participant] feature, which is based on Multiple Agree (Hiraiwa 2005), subject to a condition of Contiguous Agree (CA) (Nevins 2007). If the CA is violated, no dependency can be established, which captures the blocking effect.

Elaborating on Giblin, the fact that the matrix subject in cases like (3) is not available as a binder for the embedded *zi-ji* shows that  $C^0$  cannot probe down into the complement of a *zi*-verb. So, the *zi*-prefix must create its own binding domain.

- (3) Zhangsan<sub>1</sub> shuo Lisi<sub>2</sub> *zi-ren* Lisa<sub>3</sub> xihuan *ziji*<sub>\*1/2/\*3</sub>.  
 Zhangsan says Lisi REFL-think Lisa like self  
 ‘Zhangsan<sub>1</sub> says that Lisi<sub>2</sub> thinks that Lisa<sub>3</sub> likes him<sub>\*1,2</sub>/herself<sub>\*3</sub>’  
 (Chief 1997: 43)

We propose that (i) morpho-syntactically *zi-* is a probe unvalued for [+Participant]; since *zi-* is merged separately from the verb to which it attaches, it scopes over the complement clause; (ii) in logical syntax it is a reflexivizer.

So *zi-* looks for a [+Participant]; if it cannot find one, it is content with a non-participant [ $\pi$ ] to establish a chain, in line with the Multiple Agree analysis in Giblin (2016), based on Béjar and Rezac (2009). The blocking effect follows as in the matrix case: when *zi-* attempts formation of an agree chain, it violates Contiguous Agree if *wo* ‘I’ or *ni* ‘you’ intervenes as in (4):

- (4) ...[*zi-*<sub>probe</sub> [Zhangsan<sub>phi</sub> *yiwei* [TP Wo zhidao [Wangwu xinren [*zi-ji*]]]]].  
 [uval +participant,  $\pi$ ] [-participant,  $\pi$ ] [+participant,  $\pi$ ] [-participant,  $\pi$ ] uval  
 ───────────────────────────────────  
 ✕  
 violation of Contiguous Agree

Given that *zi-* operates within the cycle the  $C^0$  of the highest clause cannot probe into its domain. Note that its syntactic effect here matches with its semantics.

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## **Perception and production of L2 and L3 rhotics in young multilinguals; an exploratory cross-linguistic study**

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Keywords: L3 phonological acquisition, speech perception and production, rhotics, multilingualism

Extant research into the relationship between non-native speech perception and production has reported mixed findings, providing evidence of four possible scenarios: accurate perception precedes accurate production, perception and production are aligned, production precedes perception, and dissociation of the two domains (e.g. Baker and Trofimovich 2006, Flege et al. 1997, Hanulíková et al. 2012, Nagle 2018). However, there is a scarcity of studies into the perception-production link investigated from a multilingual perspective (but see Kopečková et al. 2018).

The present exploratory study aims to investigate longitudinally the acquisition of rhotic sounds in 24 adolescent learners (aged 12) who share the same language repertoires in a mirror combination (i.e. L1 German, L2 English, L3 Polish vs. L1 Polish, L2 English, L3 German). The research questions explored developmental changes in the relationship between the two modalities, as a function of the learners' L1 background, language proficiency, language-specific learnability of rhotics, and individual learner differences.

The two groups were matched for age, and the length of formal exposure to their L2 (5 years) and L3 (initial year of instruction). The selected feature involved rhotics as they have different phonetic realisations across the three languages (uvular fricative /ʁ/ in German, post-alveolar approximant /ɹ/ in British English, and alveolar trill /r/ in Polish). The design involved perception and production tasks administered in both L2 and L3 at two testing times (5 months apart). In a delayed repetition task (for production) the participants repeated carrier phrases with a token word; their

responses were recorded and analysed auditorily by three raters in terms of accuracy rate. In a forced-choice goodness task (for perception) the participants heard two renditions of the same phrase differing on the last stimulus items and decided which one sounded more target-like by pressing one of two buttons on a response box (in E-prime). The response accuracy and reaction time were recorded and analysed subsequently.

The results show better performance in perception than production of rhotics at both testing times, although the relationship between the two domains was modulated by the L1 background and different patterns were observed in both L1 groups over time. A strong effect of language proficiency was found, as overall perception and production accuracy was higher in the L2 than in the L3 in both learner groups. The findings may be interpreted as a tendency for perception leading production and/or both modalities being not aligned across the multilinguals in the present study as a group. A detailed analysis of the correlation spread and developmental changes, however, allowed us to trace specific patterns across individual learners, with individual trajectories featuring all four possible scenarios of the perception-production link.

Possible study limitations concern commensurability of the tasks selected for eliciting perception and production performance. We have shed more light on the intricate relationship between perception and production of foreign languages (both L2 and L3) by showcasing varied patterns for the link between the two modalities as possibly stemming from different acquisition circumstances and individual learner differences.

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## Frequency and coding patterns of adjectives: a cross-linguistic corpus study

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Keywords: Adjective, Frequency, Universal Dependencies; Typology; Corpus

The adjective has always been a puzzle despite the long-standing discussion in the previous literature (e.g. Chomsky 1970, Dixon 1977). Cross-linguistically, a substantial variation can be observed regarding the syntactic behavior of adjectives. Adjectives are more noun-like in some languages, while more verb-like in other languages (Wetzer 1992). In spite of the cross-linguistic diversity, it is generally acknowledged that in most languages adjectives can be used either as modifiers or as predicates. When used as modifiers, adjectives may occur with a nominal inflectional marker (e.g.

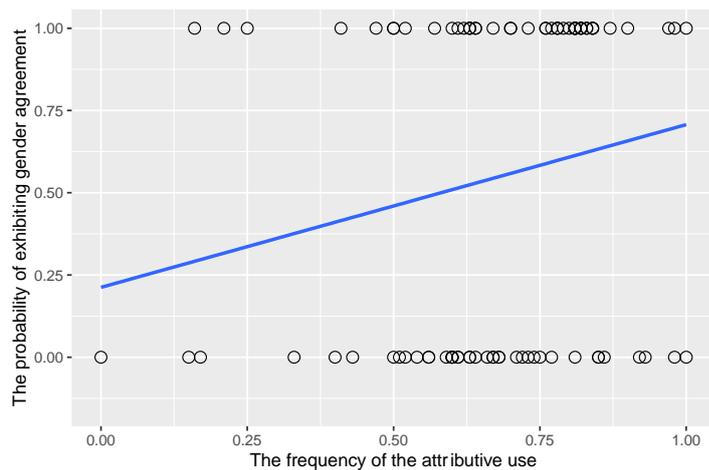
gender/number markers), as illustrated by (1a), but with a relativizer in other languages, as illustrated by (1b). Likewise, when used as predicates, adjectives may occur with a verbal inflectional marker in some languages, as illustrated in (2a), but with a copula in other languages (illustrated by 2b). Why do languages exhibit such coding patterns?

This study attempts to explain these coding patterns with relative frequency and test the hypotheses with the data from the Universal Dependencies. Following Croft (1991), nominal and verbal inflectional markers are inflectional potential; relativizers and copulas are structural coding. In line with Croft's markedness theory, I claim that coding patterns are correlated with the relative frequency of adjectives in the attributive and predicative positions. Firstly, the relative frequency of adjectives in the attributive position correlates positively with the chance of having a nominal inflectional marker, but negatively with the chance of having a relativizer. Secondly, the relative frequency of adjectives in the predicative position correlates positively with the chance of having a verbal inflectional marker, but negatively with the chance of having a copula.

These hypotheses are tested by the data from the Universal Dependencies database. The Universal Dependencies is a suitable database for the purpose of the present study because it has cross-linguistically consistent annotation for parts of speech and their syntactic contexts. Specifically, I have extracted data on adjectives of 83 languages from the UD database, and calculated the relative frequency of the attributive and predicative use in each language. On top of this, I have calculated the correlation using the Logistic Regression Model in R. The result on the correlation between the relative frequency of the attributive use and the probability of having a gender marker is presented in Figure 1, in which a positive correlation can be observed. More results will be presented in detail in my talk.

- (1) a. German  
*Ein klein-es Kind*  
 one small-SG.NEUT child  
 'a small child'
- b. Mandarin Chinese  
*hóng=de huā*  
 red=REL flower  
 'red flower'
- (2) a. Japanese  
*usagi no mimi wa naga-i.*  
 rabbit GEN ear TOP long-NPAST  
 'Rabbits' ears are long.' (Backhouse 2004: 53)
- b. English: *The train is long.*

Figure 1. The correlation between the frequency of attributive use and gender agreement



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## Differential metaphorization and grammaticalization in Chinese light verbs

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Keywords: metaphorization, grammaticalization, gradual development, metaphorical agency, light verbs

An important manifestation of language change is grammaticalization, where there could be emergence of categorical shift or new categories with semantic change. Metaphors have been recognized to be instrumental in meaning extension from a concrete domain to an abstract domain (Bybee & Pagliuca 1985, Claudi & Heine 1986, Sweetser 1988). However, little has been said about the process of metaphorization. Although there has been some work on degree of metaphoricity (Hanks 2006, Dunn 2015), the adopted approach is a static one, whereas this paper proposes a *dynamic* one and shows how metaphorization contributes to language change *gradually*. It also raises significant theoretical issues on metaphor and grammaticalization, especially involving a language like Chinese with no overt marking of P.O.S.

This paper’s dynamic approach focuses on the metaphorization of light verbs, exemplified by a common Chinese light verb *da* “hit”, which has undergone robust metaphorical extension from physical striking to a semantically bleached light verb (Tsou & Yip 2020). Drawn from the 22-year data of the Pan-Chinese synchronous database LIVAC (Tsou & Kwong 2015), 1730 *da*-compound verbs were extracted, with the 50 top-frequency ones annotated and analysed according to their metaphorical polysemy usage (i.e. covering both literal and metaphorical usage). Longitudinal comparison is also conducted between two 6-year time periods of 1995-2000 and 2011-2016.

We explore two dimensions involving gradation of metaphorization: (i) time, and (ii) metaphorical agency. First, we propose a metaphorization index based on distributional criteria and show the temporal trajectory of progressive semantic bleaching in the emergence of light verbs. Second, we show how metaphorization may be mediated by metaphorical agency, e.g. *dazao* “(lit.) hit-make” traditionally takes concrete objects like “ships” literally meaning “manufacturing ship”, but has evolved to take abstract nouns like “future” with metaphorical meaning “forge a bright future”. Notably, there is an intermediate stage involving a quasi-concrete object: *dazao qicheye de hangkongmujian* “forge an aircraft carrier of the automotive business”. Here, “forge an aircraft carrier” involves no ship, but is a metaphorical surrogate for aggrandization of “automotive business”, which is otherwise an unacceptable abstract noun.

Moreover, we discuss how metaphorization may be triggered by a *functional lexical gap* of verbs. Take English *binge-watch* (*TV shows*) as an example. The compound consists of an action “watch” and its manner “continuously”. In Chinese, similar meaning can be expressed metaphorically by a single morpheme *bao*, which literally means “cook continuously” and takes concrete objects like “congee”. Crucially, there was no lexical item exclusive for “watch continuously” in either language. While this lexical gap invited new-compound formation in English, it triggered metaphorization in Chinese on the cooking verb *bao* which shares the same manner “continuously”. Additionally, the metaphorization process of *bao* is facilitated by metaphorical agency, e.g. *bao dianhua-zhou* “(lit.) cook telephone-congee, i.e. to chat on the phone continuously”. The schema is outlined below and it may generalize to other cases of light verbs.

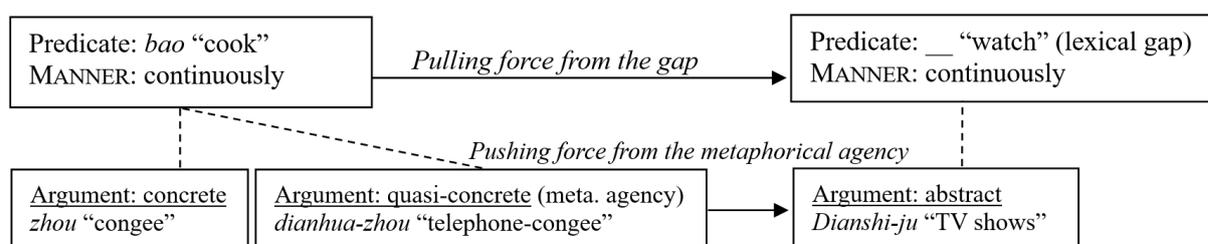


Figure 1: A schema of metaphorization of *bao*

Together with the results showing the graduation spread of metaphorization, this study offers a little appreciated view of the metaphorization process and of semantic change in grammaticalization.

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## From noun plural to plural agreement: evidence from Andi dialects

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Keywords: number agreement, grammaticalization, East Caucasian languages, morphology, non-finite forms.

The topic of this talk is the evolution of the Andi nominal plural marker *-(V)l* into a plural agreement marker (cf. *kots'i* ‘broom’ – *kots'il* ‘brooms’, *fub miq'i* ‘good road’ – *fubul miq'adul* ‘good roads’).

Data on Andi (Avar-Andic < East Caucasian) was elicited in the villages of Zilo and Kvankhidatli (Botlikh district, Republic of Dagestan, Russia) in 2017–2019. Besides, texts in the Andi, Rikvani and Zilo dialects of Andi were investigated and a remote survey of the Muni dialect was conducted.

The goals of this research are concerned with *description* and *diachrony*: I describe in detail how *-(V)l* functions on different agreement targets and address the following question: how might this mechanism of agreement have evolved?

*-(V)l*-agreement has not been treated as a unified phenomenon in the descriptive grammars of Andi (Dirr 1906, Sulejmanov 1957, Salimov 2010), which makes my data novel. From a typological perspective, the rise of verbal person agreement has been extensively discussed in (Givon 1976, Lehmann 1982, Fuß 2005), however, the evolution of number agreement has not been discussed in such detail, although see (Lehmann 1982, Cruz 2015, Di Garbo 2020). My data contribute to the understanding of this evolution.

### Description: targets and rules of *-(V)l* agreement

The agreement suffix *-(V)l* occurs on various targets: NP dependents, verb forms (1) and adverbs (1). *-(V)l*-agreement on NP dependents is controlled by the head of the NP, *-(V)l*-agreement on verbs and clausal dependents is controlled by the absolutive argument of the clause. Most nominal dependents always attach *-(V)l*, except demonstratives, which do so optionally, and numerals, which attach *-(V)l* rarely. Some verb forms, e.g. aorist, never attach *-(V)l*, most verb forms attach *-(V)l* rarely, and

intransitive imperative always attaches *-(V)l*. Adverbs vary: some always attach *-(V)l*, some do so optionally or never.

(1)	<i>hege-w-ul</i>	<i>fu-w-ul /</i>	<i>*fu-w</i>	<i>helli-r(-il)</i>
	DEM-M-PL	good-M-PL	good-M	run-PROG
	‘They run well’.			

At least some of the rules governing *-(V)l*-agreement seem to be motivated diachronically.

### Diachrony

*-(V)l* is most probably the reflex of *\*li*, which is one of the reconstructed Proto-Andic plural markers (Alekseev 1988: 92-93).

I propose the following stages of expansion of *-(V)l*:

	Process	Upper Andi (Andi, Rikvani, Zilo and others)	Lower Andi (Kvankhidatli, Muni)
1	<i>-(V)l</i> is generalized as a nominal plural marker.	+	+
2	<i>-(V)l</i> expands as a plural agreement marker into the noun phrase.	+	-
3	<i>-(V)l</i> expands as plural agreement marker into the verb paradigm.	+	-

The second round of expansion resulted in obligatory or at least frequent use of *-(V)l* on its targets. *-(V)l* expansion into the verb paradigm only led to rare occurrences of *-(V)l*.

I believe that the expansion of *-(V)l* into the verbal paradigm followed the 1<sup>st</sup> stage and can be explained by 1) the fact that some verb forms have nominal origin or 2) by analogy with participles in the predicative position, which in Andi attach plural morphology. I will present examples that are explained by 1) and those better explained by 2). Besides, I will touch upon the varying behavior of adverbs.

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## Phonological short-term memory: Does ethnic background matter?

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**Keywords:** phonological short-term memory, language acquisition, bilingualism, working memory, German language

**Introduction.** Phonological short-term memory (PSTM) was proven to be one of the most important innate skills for the acquisition of both the first and second language. PSTM tasks such as repetition of nonwords, digit spans, and sentences are widely used to identify children with language-related medical issues (e.g., developmental language disorder). Both PSTM skills and language-related medical issues are sometimes distributed unevenly among children with various ethnic (or cultural) backgrounds (Akhlaghypour & Assari 2020; Morton et al. 2002). However, it remains unclear which factors and to what degree are responsible for these differences. In this study, a large sample of German preschoolers was examined retrospectively in regard to the distribution of PSTM and language test scores depending on the ethnic background and on other sociodemographic/sociolinguistic characteristics of children, their families, and regions they lived in.

**Methods.** A total of 1,000 four-year-old preschoolers (54% male; 61% monolingual Germans, 37% bi/multilingual children, 2% unknown) were tested in German kindergartens with the PSTM test “Sprachscreening für das Vorschulalter” (“Language Screening for the Preschool Age”; SSV) and with a validated short version of the language test “Marburger Sprachscreening” (“Marburg Language Screening”, MSS: speech comprehension, grammar, vocabulary, articulation), including questionnaires for parents and kindergarten teachers. PSTM was assessed by the repetition of German-based nonwords and sentences. Associations between total scores of correct answers in both tests (SSV and MSS) and sociodemographic characteristics of study participants, including ethnic background, were examined by uni- and multivariate methods.

**Results.** Both PSTM and language test scores were distributed unevenly among ethnic subgroups and were lower in the subgroups with the most limited access to the German language (Turks, Arabs). Among other things, such children attended less often nursery schools and study groups and played less often with German speaking children. Their families were often geographically separated from native Germans and tended to cluster. Children with low test scores lived in comparatively poor regions with a limited quality and quantity of language input (more immigrants, more unemployed, lower educational level). The distribution of known language-related medical issues in the largest

subgroups of immigrants (e.g., Turks and Arabs compared to all other immigrants) did not differ significantly.

**Discussion.** Low performance of some ethnic subgroups in PSTM tasks seems to result not from the uneven distribution of language-related medical issues, but, rather, from limited German language skills. Since PSTM tasks are German-based, they also assess German vocabulary, phonotactics, and grammar skills. Thus, performance in repetition tasks varied considerably in the sample due to (a) different levels of German language skills and (b) different sociolinguistic conditions of the language acquisition among ethnic subgroups. Children speaking Turkish and Arabic languages acquired German under the most unfavorable sociolinguistic conditions and therefore demonstrated the lowest PSTM and language test scores. The use of “quasi-universal” PSTM tasks such as nonwords proposed by Chiat (2015) might provide a more direct access to the measurement of PSTM performance. These nonwords account for the phonotactics of many world languages in order not to put any ethnic subgroup at a disadvantage.

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## On the link between evidentiality and egophoricity in languages of the Greater Himalayan Region

Marius Zemp, Fernando Zúñiga & Benjamin Brosig

Evidentiality is “the linguistic means of indicating how the speaker obtained the information on which s/he bases an assertion” (Willet 1988:55). Tibetic evidential distinctions much like conjunct-disjunct oppositions in other Himalayan languages seem to be informed by the speaker’s involvement in the event profiled (DeLancey 1986, 1992; Hale 1980). Both types of distinctions may be said to involve ‘egophoric’ and ‘allophoric’ markers, that is, markers which mainly occur when the speaker respectively is and isn’t the subject in a statement (Tournadre 1991, 2008; Floyd, Norcliffe & San Roque 2018). The present paper shows that a majority of the evidential distinctions found in the Greater Himalayan Region (GHR) contrast ego- with allophoric markers, but that the contrasting markers nowhere strictly keep to their respective domains. Instead, we may distinguish three main types of distinctions based on the ways in which markers encroach on each other’s domains:

- (1) Factual vs. direct (Western Tibetic, Zemp 2017): Contrasting with *’dug*, which indicates that a present state was directly witnessed, the previously neutral *yod* came to indicate that the speaker simply *knows* about this present state. While speakers often obtained this knowledge by participating in the event that led to the state profiled, they may use *yod* also when they closely monitored this event as external observers. Thus, this type of egophoric marker encroaches on the allophoric domain.

- (2) High vs. low degree of personal involvement (Mongghul, Chinggeltai 1989; Fried 2018): ‘Subjective’ *-ii* and ‘objective’ *-a* predominantly occur when the speaker respectively is and isn’t the subject. However, they symmetrically deviate from this predominant pattern: *-ii* may be used when the speaker is *not* the subject of the event profiled when s/he was *personally involved to a higher degree* than one would expect from a non-subject, and *-a* may be used when the speaker *is* the subject when s/he was *personally involved to a lower degree* than one would expect from a subject. Thus, the two contrasting markers symmetrically encroach on each other’s domains.
- (3) Privileged (conjunct) vs. non-privileged (disjunct) access (Kathmandu Newar, Hargreaves 2005): While past conjunct *-ā* in statements only occurs when the speaker is the subject, disjunct *-a* not only occurs whenever s/he isn’t, but sometimes also when s/he is, e.g. to signal that s/he lacked control over her/his own action. Thus, the allophoric marker encroaches on the egophoric domain.

The other types of evidential contrasts identified in the GHR are those between direct and indirect past markers (two subtypes: direct evidential *V-IUGA* in Middle Mongol [Street 2009] may also be used by someone who *performed* the event profiled, *V-thæ* in Amdo Tibetan can’t [Sun 2003]), and that between two direct past evidentials, Dbus-Gtsang Tibetan *V-byung* and *V-song*, where the former occurs only with events directed towards the speaker (Haller 2000:92).

The present paper suggests that a descriptively adequate account of evidentiality in the GHR needs to include egophoric markers (unlike Aikhenvald 2004, 2018), shows where the discussed types of evidential contrasts are found, and gives diachronic accounts for their synchronic differences.

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## **WORKSHOP PRESENTATIONS**

<b>WORKSHOP 1</b>
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## **Adjective: The unknown Category. Inflection, articles and other functional material in the AP**

Alexander Peter Pfaff & Alexandra Rehn

Keywords: *adjectives, categorial status, functional elements, morpho-syntax, typology*

In spite of a substantial body of research on the status of **A**(djectives), from both a generative (e.g. Baker 2003) and functionalist (e.g. Bhat, 1994) as well as a diachronic and typological (Dixon 1982; Rießler 2016) perspective, there does not seem to be a broad consensus on a number of relevant questions like

- (i) Is A a universal category?
- (ii) Is A a category at all or is it rather a version of N or V?
- (iii) Are there (sub-)categories like “nouny” and “verby” As?
- (iv) Which categorial properties make A clearly distinct from N and V?

Against the backdrop of these rather broad and general questions, this workshop addresses a relatively specific domain – **functional elements (inflection, articles, *ezafe*) in the AP** and their (possible) **contribution to or interaction with the categorial status of A:**

- (v) Are there functional elements/morphemes in the AP that are intimately related to or dependent on the category A, or even determine adjectivehood?
- (vi) Do they have cognates in other domains (NP, VP), and if so, how are they related (morphologically/semantically/etymologically)?

The general aim of the workshop is to gain new insights regarding the – up to this day unanswered – question of what it is that makes an A an A. Do As have specific properties that allow a definition of their categorial status, and if so, are they substantial or merely functional properties (e.g. attributive modification) – or are As simply the least specified category (see Baker 2003) that are best characterized by what they are not rather than by what they are?

**The workshop has an empirical and a theoretical component, and explicitly welcomes diachronic, comparative and typological, as well as theoretical perspectives.** On the empirical side, we want to bring together a number of relevant phenomena from a range of languages, and try to establish a (small-scale) typology of relevant items. The goal is to formulate diagnostics that allow us to compare such AP internal material across languages. On the theoretical side, we are interested in what role these items play regarding the categorial status of A.

Below we give a brief (non-exhaustive) overview of relevant topics for the WS:

- a) Early Indo-European has been claimed not to have a separate category A, but merely one super-category **nominal**. One of the arguments used is that presumed adjectives are syntactically, semantically and **morphologically** non-distinct from nouns. This raises the question what characterizes **inflectional material** as **adjectival**. Is it merely distinctness

from nominal inflection, is it gender (and phi-) agreement or something else? Germanic weak adjectives are particularly interesting as they seem to have changed their categorial status from N to A (see Osthoff 1876; Viti 2015; Rehn 2019).

We are thus particularly interested in adjectival inflection that appears to be more than simply the spellout of agreement, such as the strong vs. weak inflection in Germanic, the definite vs. indefinite inflection in Latvian and Lithuanian, but also short vs. long adjectives in Slavic languages.

- b) Some languages employ *adjectival/linking/attributive articles*: article elements that appear to be inherently dependent on the presence of an adjective. Although these elements are usually etymologically related to demonstratives/definite determiners, they cannot be considered “regular” definite articles since they are more closely associated with the adjectival constituent, rather than the noun phrase at large. Consequently, it has been argued that they are narrow components of the AP (Marušič & Žaucer 2007, 2013; Perridon & Sleeman 2011; Rießler 2016; Börjars & Payne 2016; Pfaff 2019). Elements fitting the profile of “adjectival article” can be found in Greek, Slovenian, Albanian, Romanian, Gothic, Old Norse, Hebrew, and others. There is, however, quite some (crosslinguistic) diversity, and the precise function of these elements, their grammaticalization path and their relation to definiteness remain unclear.
- c) *Comparative/superlative morphology* is relevant in the present context because it seems to be a paradigmatic adjectival property, designed for the category A, and is often used as one diagnostic for adjectivehood. It has however been pointed out that there are languages where comparative morphology is also found with nouns and even verbs (for discussion and further references, see Ratkus 2011). This suggests that comparison is not uniquely dependent on a category A.

**Participants should try to make reference to one or more of the following questions:**

- ⇒ What is the role/function/contribution of AP-internal elements?
- Are they responsible for “adjectivehood”?
  - Do they presuppose a category A?
  - Can they serve as unambiguous diagnostics?
  - How do they vary crosslinguistically?
  - Do we find the same morphology with other “attributes” (e.g. appositions)?
  - Do we find interesting cases of systematic multifunctionality/polysemy or common grammaticalization paths with VP-/NP-internal elements?

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## Dependency reversal in Central African languages

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**Keywords:** dependency reversal, property words, possession, typology, Central African languages

Dependency reversal describes an uncommon phenomenon of noun-attributive constructions in which property attributes surface as the syntactic head. It is widely accepted that nouns are the head of noun-attributive constructions, because conceptually property concepts cannot be understood without reference to object concepts (cf. Croft & Cruse 2004) and formally nouns may determine feature marking that occurs on property attributes. However, in the cases of dependency reversal, formal evidence suggests that property attributes appear as the head and dominate the noun-attributive constructions. For example, in Eton (Bantu, Cameroon), *mīŋ-kód mí=mbú mí-bá* (4-skinny IV.CON=[10]dog IV-two) means 'two skinny dogs' (Van de Velde 2008). The property expression 'skinny' not only takes noun class marking distinct from the noun 'dogs', but also controls noun class marking on the connector *mbú* and the numeral *bá* 'two'. Then, the dependency relation between the property attribute and the noun is deemed to be revised at least at the syntactic level.

Dependency reversal in noun-attributive constructions is a rarely investigated phenomenon (cf. Ross 1998, Malchukov 2000, Van de Velde 2011), compared to the well-recognized noun-headed pattern. This is largely determined by its low frequency in the world's languages. However, as pointed out by some African specialists (cf. Creissels & Good 2018), dependency reversal is expected to be a majored phenomenon in Central Africa. Following this geographical clue, an investigation is conducted on Central African languages. For a practical consideration, a sample of over 40 languages is selected to represent Central African languages. Consequently, dependency reversal is studied from a comparative perspective.

A close look at dependency reversal may shed light on the general issue of the relationship between form and meaning. The conceptual association between property and object concepts lead to the view that property

words are the intrinsic semantic head, thus dependency reversal presents a case of form-meaning mismatches. Once the analysis of mismatching is accepted, a following question arises: what mechanisms warrant such a mismatch. Exploring such mechanisms is a goal of the current study.

On the other hand, it can be clearly observed from sampled languages that dependency reversal shares the same encoding with possessive constructions, as illustrated in (1).

(1) Akoose (Bantu, Cameroon; Hedinger 2008: 47, 63)

- |    |                          |           |             |
|----|--------------------------|-----------|-------------|
| a. | <i>njun</i>              | <i>m̄</i> | <i>mod</i>  |
|    | 3.old                    | 3.CON     | 1.person    |
|    | 'old person'             |           |             |
| b. | <i>e'séd</i>             | <i>é'</i> | <i>ndáb</i> |
|    | 8.wall                   | 8.CON     | 9.house     |
|    | 'the walls of the house' |           |             |

The possessive-like encoding of dependency reversal offers a potential explanation that attributiveness and possession are conceptually associated or even the same in languages of dependence reversal, since it is fair to say that properties are in a possessive relationship with objects. However, this explanation raises a problem regarding the terminology of dependency reversal. It is normal in possessive constructions that the possessed occur as the head and determines grammatical marking on other linguistic elements. This logic chain suggests no reversal between the head and the dependent.

A study of dependency reversal in Central Africa can not only enhance our understanding of dependency reversal, but also contribute to studies of general issues in linguistics.

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## The morphosyntax and semantics of Adjective Classifiers

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Keywords: adjectives, classifiers, morphology, semantics, Sino-Tibetan

A familiar distinction between classifier and gender noun classification systems is that gender occurs across syntactic categories, and classifiers do not. This paper examines classifiers on adjectives (A.CL) (Aikhenvald 2000). Though Sinitic languages are classic examples of noun classifier languages, a little studied effect is that in many varieties, classifiers also occur on adjectives (see Liu

2010). This talk introduces morphosyntactic and semantic properties of adjective classifiers in an understudied variety of Teochew (Southern Min, Sino-Tibetan) spoken in Shantou ('Swatow'). We show that, while adjective classifiers have some distributional properties in common with gender, adjective classifiers can be distinguished from gender in their morphological and semantic properties. The results provide novel support for the traditional division between classifier and gender nominal classification (Corbett 1991).

The Shantou Teochew noun classifier (CL) inventory is rich, comprising approx.200 items; their grammar is familiar of better-studied Chinese languages. Adjective classifiers obligatorily co-occur with dimension adjectives (1), of which there are only ten in the language. Adjective classifiers are ungrammatical with all other lexical adjectives. Their form depends on the class of the head noun.

- (1)   Hi       sa                   go       dua\*(-go)/ mui(\*-go)               gai               tun.  
       that   three   CL       big-A.CL/ pretty-A.CL N.MOD               candy  
       'Those three big/ pretty (pieces of) candy.'

Three tests show that the marked adjective distributes with other unmarked adjectives (and not nouns or verbs): (i) Emphatic *oi*: *oi* (lit.) 'able' embeds adjectives (and not nouns/verbs) to produce emphatic meaning; (ii) Comparatives: only adjectives can occur as the measure in a *ru* 'more' comparative; (iii) Reduplication: AA (but not NN/VV) reduplication is interpreted as an intensive in infant-directed speech. We show further that adjective classifiers are bound morphemes, comparable to typical gender inflection. First, in reduplication only heads (including complex heads, but not phrases) can reduplicate; the adjective classifier obligatorily reduplicates (e.g. *dua\*(-go)-dua\*(-go) tun* 'very big candy'). Second, Shantou Teochew has [Subject X<sub>1</sub>X<sub>2</sub> Object] causative/resultative, where only heads (and not XPs) can occur as X<sub>2</sub>. A+A.CL can occur as X<sub>2</sub>.

However, although the form of adjective classifiers is determined by the noun, adjective classifiers need not have the same form as the noun classifier. To give one example (of many), there has been massive recent contact between Mandarin and Shantou Teochew, extending to classifier vocabulary. Mandarin-influenced vocabulary are grammatical as the noun classifier (*diao* in (2)); adjective classifiers must be from the native vocabulary (*mue* in (2)). This gives rise to mismatches. We are not aware of comparable mismatch examples in gender agreement.

- (2)   No       diao/mue                   dua(\*-diao)/\*(-mue)               gai               hu.  
       two   CL                               big-A.CL                               N.MOD               fish  
       'Two big fish.'

Second, adjective classifiers contribute lexical semantics. The facts are complex, but briefly: with default adjective classifiers, the adjective has a 'neutral' interpretation (*dua-go* big-A.CL<sub>Default</sub> means 'big'); adjective classifiers that lexically specify dimensions restrict the interpretation of the adjective (*dua-diao* big-A.CL<sub>1Dimensional</sub> means 'long'). We show that there are four semantic patterns.

In sum, despite distributional similarities, adjective classifiers in Shantou Teochew can be formally distinguished from gender.

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### On the definition of adjectives in Dinka

Mirella L. Blum

<not updated>

## Adjectives in Albanian: Evidence from Negation

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Keywords: Albanian, adjective typology, ezafe, negation

In Albanian (IE Balkan language), the class traditionally labelled ‘adjectives’ includes a range of formally rather diverse phenomena, the only common denominator being their use in postnominal attributive modification.

Albanian has two lexically defined attributive modification strategies, juxtaposition as in (1a) and an ezafe-like construction with a clitic linker element traditionally called the article (1b). In addition, different lexical subclasses of ‘adjectives’ display various degrees of head-driven agreement marking, from no overt morphological marking whatsoever to marking agreement in gender and/or number, on the lexical base itself, or with the shape of the article. Only the so-called articulated adjectives as in (1b) show agreement in case, as well, by virtue of the article morpheme.

This produces a rather complex system of morphosyntactic (sub)classification (cf. Buchholz & Fiedler 1987: 319–324), which raises the question of which formal elements, if any, may be said to actually define adjectivehood in Albanian, other than their attributive use and semantics—the criterion by which they are primarily defined as a class in the traditional grammar.

- |     |                           |                        |                    |
|-----|---------------------------|------------------------|--------------------|
| (1) | a. <i>gjuh-a</i>          | <i>(jo-)standard-e</i> |                    |
|     | language-NOM.DEF.SG.FEM   | (NEG-)standard-FEM     |                    |
|     | ‘(non-)standard language’ |                        |                    |
|     | b. <i>gjuh-a</i>          | <i>e</i>               | <i>(pa-)fol-ur</i> |
|     | language-NOM.DEF.SG.FEM   | LNK(NOM.SG.FEM)        | (NEG-)speak-PTCP   |
|     | ‘(non-)spoken language’   |                        |                    |

In this talk, a detailed formal analysis of adjectives in Albanian is presented, in order to show that, given the facts of their morphological makeup, it is extremely hard to motivate the adjective as a formally distinct category for Albanian. In fact, juxtaposed ‘adjectives’ can be safely analysed as actual nouns, in terms of both their morphology and morphosyntax (similarly as in other old IE languages, cf. Pfaff 2020). The similar holds for the ezafe-like linker/article. It obligatorily combines

with participles, turning them into ‘adjectives’, as in (1b), effectively functioning as a nominalizer and agreement marker (cf. Franco, Manzini & Savoia 2015). It is also found outside the AP, with some classes of deverbal nouns (e.g., *e folme* ‘local dialect, speech’), in nominal possessive constructions (where it is traditionally analysed as a “genitive” case marker), and with kinship terms. Albanian, therefore, may seem as an adjectiveless language, in formal terms, thus questioning the universality of this lexical category.

Nonetheless, it will be shown that it is possible to formally motivate the adjective as a separate category in Albanian, based on the distribution of the negative (privative) marker *pa*, as in (1b). Negation in Albanian is expressed by different morphemes in the sentential, nominal, and as it turns out, adjectival domains. Namely, the functional element *pa* seems to require an exclusively adjectival projection (in the sense of Corver 1997), and to effectively turn nominal and verbal bases into adjectives. Rather than in the morphology of AP itself, adjectivehood in Albanian is, thus, ultimately revealed in the functional superstructure of AP.

Besides the implications this may have for the internal structure of extended adjectival projection and the categorial status of adjectives, this also allows us to discuss the Albanian data in relation to recently proposed typologies of negation (De Clercq 2018) and adjectivehood (Mitrović & Panagiotidis 2020).

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## The Adjective Category in Japanese

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Keywords: Japanese, adjective category, *i*-adjectives, *na*-adjectives, *no*-adjectives

This paper focuses on the adjective category in Japanese and its morphologically distinct members. I propose a unification of the two adjective groups, *i*- and *na*-adjectives and extend this analysis to a possible third morphologically distinct but hybrid group.

Japanese has two canonical adjective groups, *i*- and *na*-adjectives. The formal differences between these groups and their paradigmatic parallels to verbs and nouns respectively led many authors (Rießler 2016; Baker 2003a, b; Uehara 1998) to the conclusion that *i*-adjectives are rather

verb-like and *na*-adjectives rather noun-like. Some authors (e. g. Wetzer 1996) claim that there is no independent category ‘adjective’ in Japanese. In fact, *na*-adjectives seem to always appear with a copula and share their morphological paradigms with nouns. An exception is the attributive morpheme *-na* which differs from the morpheme *-no* found between nouns. *i*-adjectives show the same forms in attributive and predicative position, do not seem to appear with a copula but show independent inflections similar to verbs.

Based on cross-linguistic as well as language-specific evidence, I argue that both adjective groups are true adjectives that clearly contrast with nouns and verbs. First, I show that Baker’s claim (2003a) that only adjectives can be complements of degree heads and act as secondary resultative predicates, but not nouns and verbs, is borne out in Japanese as well. Furthermore, both adjective groups can (morphologically) derive manner adverbs which is impossible for nouns and verbs.

I also demonstrate that the adjectives in question are subject to derivational processes. The suffixes *-sa* ‘-ness’ and *-garu* ‘tendency’ attach exclusively to *i*- and *na*-adjectives and turn them into nouns and verbs, respectively. Other suffixes, *-sugiru* ‘too much’, *-mitai* ‘seem’, *-sō* ‘seem’ and *rashii* ‘resemble’, can also be combined with both adjective groups (while either nouns or verbs are blocked), another indicator that these can be grouped together (Nishiyama 1999). Syntactic and paradigmatic arguments for this parallelism consist in the fact that neither *i*- nor *na*-adjectives can express mood, unlike verbs, or be combined with case particles and receive case, unlike nouns. Also, they cannot head direct objects or be attributively modified themselves (Backhouse 2004).

I then extend this analysis to a group of lexemes that carry the morpheme *-no* in attributive position. As mentioned, this multifunctional element prototypically appears between nominals where it constitutes genitival and other case relations. Sometimes, it can be analyzed as a mere linker (Katō 2003). I provide the following arguments that lexemes such as *mumei* ‘unknown’ in (1), despite this morphological parallelism are adjectives: They do not receive case, cannot be modified (Muraki 2012) and take up the afore-mentioned suffixes.

- (1) *mumei-no kashu*  
unknown-NO singer  
‘an unknown singer’

I argue that such lexemes form a third morphologically distinct adjective group which can be labeled *no*-adjectives. However, this group is hybrid given that some lexemes show properties of other word classes simultaneously and seem to fluctuate.

In conclusion, Japanese has three true adjective groups with distinct morphological inventories. Within these groups, *no*-adjectives stand out as they form a complex, hybrid group.

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## Adjectives in Cantonese Are Not Verbs

Charles Lam  
<not updated>

**A definite article inside the AP domain**

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Keywords: Slovenian, definite article, adjectival definiteness, polydefiniteness, AP

The Slovenian adjectival definite article TA is intimately linked with adjectives. It cannot appear directly on nouns, (1), it can repeat on stacked adjectives, (2), and it doesn't make the noun phrase definite, (3) (Marušič and Žaucer 2006).

Marušič and Žaucer (2014) claim TA differs from the better-known phenomena like the Scandinavian definite article or the Greek polydefiniteness, proposing that it is really a definite article inside the Adjectival phrase.

- (1) \* Tega ta svinčnika  
this.M.SG.ACC TA pencil.M.SG.ACC  
'This pencil'
- (2) tá ta debel ta zelen svinčnik  
this.M.SG.NOM TA fat.M.SG.NOM TA green.M.SG.NOM pencil.M.SG.NOM  
'this fat green pencil'
- (3) Lihkar je mim pridirkal en ta hiter avto.  
just-now AUX by sped a TA fast car  
'Some fast car has just sped by.'

As argued by M-and-Ž (2014), TA does not quantify over individuals. (3) does not presuppose there exists a unique fast car, so arguably TA has nothing to do with the functional projections of the extended noun phrase, but rather specifies the degree to which an adjective holds: (3) presupposes that there exists a unique type of cars, concretely, a unique degree of fastness that cars should have in order to be understood as fast cars, which suggests that TA can be seen as a definite article over degrees. TA is thus located within the extended projection of the adjective establishing yet another parallel between the NP and the AP.

Here we want to point out another property of TA, mentioned but not discussed already in M-and-Ž (2006). As shown in (4) and (5), TA can be repeated even within the same AP. Both examples in (5) were extracted from the largest corpus of Slovenian, Gigafida, but they are ultimately examples from an online forum. Such repetitions are not something a definite article of the NP should be able to do, but just like polydefiniteness of the nominal definite article creates multiple copies of the article attached to each AP, polydefiniteness within the AP creates multiple articles within the constituents inside the AP.

- (4) Ta ta čist ta nar ta boljši svinčnik  
 this.M.SG.NOM TA clear TA most TA better pencil.M.SG.ACC  
 ‘The very best pencil’
- (5) a. Narodnozabavni rock je ta naj ta boljš skladba letošnje Evrovizije.  
 folk rock aux TA most TA best piece this-year’s Eurovision  
 ‘Folk-rock is the very best song at this year’s Eurovision.’
- b. Bomo ta nar ta bul učena nacija na tem svejtu.  
 will TA most TA more educated nation on this world  
 ‘We’ll be the most educated nation on this world.’

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## **Adjective attribution marking in Aanaar Saami: A determinant of the adjectival category?**

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Keywords: adjective attribution, Saami languages, Aanaar Saami, morphosyntactic variation, noun phrases

From an areal perspective, the two most common ways of marking adjective attributes in the languages of Northern Eurasia are juxtaposition and agreement. The default marking of attribute adjectives as it occurs in Saami languages, however, falls into neither of these two categories and, as

such, is unique within the Uralic language family and rare among the languages of Europe (Rießler 2016: 42, 134).

The Saami languages form a dialect continuum from central Sweden to the Kola peninsula in Russia. They typically distinguish between two separate adjective forms, one of which is found in predicate, the other in attribute position. Consider the following examples from Aanaar (Inari) Saami for a comparison of the adjective *ruopsâd*, attr *ruopsis* ‘red’ in predicate (1a) and attribute (1b) position:

- (1) a. *Táálu lii ruopsâd.*  
 house be.3SG red.PRED  
 ‘The house is red.’
- b. *Mun aasâ-m ruopsis táálu-st.*  
 1SG live-1SG red.ATTR house-LOC  
 ‘I live in a red house.’

The suffix *-(V)s*, as also illustrated in the example (1b) above, is considered to be the prototypical marker of Saami adjective attributes (see, for example, Rießler 2016: 201 ff.). It is, however, not the only way to form morphologically marked adjective attributes in Saami. Moreover, not all adjectives have distinct attributive forms and, in some Saami languages, we also find instances of agreement (see e.g. Rauhala 2013).

While recent researches have primarily focused on the possible origin and development of the Saami adjective attribute forms, the aim of the present paper is to provide an overview of adjective attribution marking and its variation in one Saami language, Aanaar Saami. Aanaar Saami is traditionally spoken in the northernmost part of Finland and, with a number of 350–450 speakers, is classified as a severely endangered language.

By analysing empirical data from older language samples collected in 1952 as well as the corpus of written Aanaar Saami texts (SIKOR), this paper investigates (1) how adjective attributes are marked in Aanaar Saami and (2) how and to which degree they differ from other attributes. The presentation will, amongst others, include examples of optional agreement found with certain types of adjectives. Their agreement with the head noun resembles the partial agreement found with pronouns in attribute position, i.e. in some cases, they only agree with the head noun in number, but not in case. Finally, this paper will discuss whether in Aanaar Saami, adjective attribution marking could function as a determinant of the adjectival category.

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## Strong and weak adjectives in Old High German: A corpus study

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Keywords: Germanic dual inflection, Old High German, Referenzkorpus Altdeutsch, definiteness, indefiniteness

Adjectives in Old High German (OHG) display so-called strong and weak inflectional patterns as a typical property of Germanic dual inflection. In contrast to modern German, which displays dual inflection as well but in which the choice among the inflectional patterns depends on the presence of phi-features on the preceding determiner (see Rehn 2019 for summary), the distribution of the inflectional patterns in OHG is assumed to be semantically driven, i.e. to depend on the (in)definiteness of the DP. More precisely, it is assumed that strong inflection triggers an indefinite interpretation while weak inflection triggers a definite interpretation of the respective DP (Demske 2001). But this is challenged by observations according to which the strong pattern is also attested in definite environments, e.g. after demonstratives as in (1) taken from *Referenzkorpus Altdeutsch* 1.1, see Heinrichs (1954: 68) and Behaghel (1923: 170):

- (1) *zi archennenne dhen heilegan gheist*  
to recognize-dat.sg the-acc.sg holy-acc.sg.masc.str ghost  
‘to recognize the holy ghost’  
DDD-AD-Isidor\_1.1 > I\_DeFide\_4

This suggests that the distribution of dual inflection in OHG does not correlate with (in)definiteness in the commonly assumed manner. To shed more light into this relation, the semantic properties of DP containing adjectives are investigated on a large scale, using *Referenzkorpus Altdeutsch* 1.1. To exclude the influence of determiners already present in OHG, the search is restricted to bare DPs (both with and without an overt head noun). The semantic properties of the DPs are determined by applying well-known classifications, e.g. by Himmelmann (1997) for definites and by von Heusinger (2011) for indefinites. The results of a pilot phase of the study confirm that strong inflection is not restricted to adjectives in indefinite DPs but can also occur in DPs which receive definite interpretation. E.g., the strong adjective in (2) is definite via genitive modification, while the one in (3) is generic, referring to a set of individuals identifiable by the speaker. The same applies to adjectives displaying zero inflection as a subtype of the strong paradigm, see (4) in which the DP containing a strong adjective refers to a familiar notion:

- (2) *enti gaduuingu dir ěrdrihhes hruomege*  
and bow you-dat.sg world-gen.sg glorious-acc.pl.masc.str  
‘and I will cause the glorious ones of the world to bow in front of you’  
DDD-AD-Monsee\_1.1 > MF\_3\_FC.XXXIV

- (3) *eno ni tuont thaz heidane man*  
Part Neg do-3pl this pagan-nom.pl.masc.str people-nom.pl  
‘Do not the pagans do the same’ / Lat. *nonne et ethnici hoc faciunt?*  
DDD-AD-Tatian\_1.1 > T\_Tat32

- (4) *dhasz du firstandes heilac chiruni*  
that you undersand-2sg.subj holy-acc.sg.neut.0 secret  
‘in order for you to understand [the] holy secret’  
DDD-AD-Isidor\_1.1 > I\_DeFide\_3

By contrast, weak inflection on adjectives in bare DPs systematically occurs in comparatives and superlatives, predominantly used as predicates, see (5):

- (5) *Endi siin hohsetli scal uuesan festista*  
 and his throne shall be-inf firmest-nom.sg.neut.wk  
 ‘and his throne will be the firmest one’  
 DDD-AD-Isidor\_1.1 > I\_DeFide\_9

These findings indicate that strong adjectival inflection in OHG can be considered a general case, while weak inflection is subject to restrictions of morpho-syntactic type.

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## Definite adjective forms in early Germanic: From nominal periphrasis to agreement

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Keywords: adjectives, definiteness, inflection, agreement, periphrasis

In this paper I challenge the traditional account of the variation between adjective forms in older Germanic, according to which the strong : weak opposition is based on  $\pm$ definiteness, with the “strong” form being indefinite in contradistinction to the morphologically “weak” definite form, triggered by a definite determiner, as in Gothic STR *ubil-s* ‘evil’ vs. WK *sa ubil-a* ‘the/that evil (one)’.

The well documented evidence of variation in Gothic shows that the type and syntactic realization of the (weak) adjective inflection is sensitive to features such as classification and identification (Miller 2019: 66–77). This finding highlights an additional dimension to the variation of forms, with the strong forms not merely being opposed to determined weak forms, but also undetermined weak forms. At the same time, the determined and undetermined weak forms appear in a regular contrast with each other. What follows from this evidence is that, on its own, the weak form of the adjective is not definite.

I argue that the definite value of the weak adjective inflection in Gothic (and, by extension, early Germanic) is realised via the co-occurrence of the definite determiner and the weak inflection. In other words, the DET+WKADJ syntactic construction is an example of nominal periphrasis. By expressing a grammatical feature (of definiteness) similar to that conventionally realised by inflection alone, it fills a cell in an otherwise inflectional paradigm, thereby straddling the morphology-syntax

boundary. Thus, the DET+WKADJ periphrase fulfils the requirements of “canonical” morphology (Brown et al. 2012). Namely, it (1) expresses grammatical meaning via a distinct dedicated form (e.g. the sum of *sa* + *-a* in the example above); (2) the periphrastic feature of definiteness is established independently of the other features (gender, number and case), with which it regularly occurs at paradigmatic intersections; (3) it is regular and obligatory by virtue of having a predictable distribution vis-à-vis the strong form; (4) it is exhaustive by virtue of applying to the whole lexicon. As a periphrastic structure, the DET+WKADJ construction also fulfils the criteria of “canonical” syntax (Brown et al. 2012).

An appreciation of weak forms of the adjective in Gothic and later Germanic languages shows that the scope and status of DET+WKADJ changed over time. In Old English, for instance, weak forms co-occur not only with the definite determiner but also the possessive pronoun (e.g. *mīn lēof-a sunu* ‘my dear-DEF son’), thereby violating the principle that a periphrastic construction has a dedicated auxiliary. While the earliest Old English records showcase the same kind of variation between definite and classifying/identifying forms as in Gothic, in the later records variation of this kind is significantly reduced, with the weak form typically occurring with one of a few definite determiners. This suggests that a former periphrastic structure was later reanalysed as an agreement phenomenon.

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## What heritage languages can tell us about the category adjective: evidence from Heritage Greek

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Keywords: adjectives, Heritage Greek, category bias, concord, agreement

**Background:** Research on different populations and languages suggests that adjectives are treated unlike nouns and verbs. Berman (1988), studying the adjective acquisition in Hebrew, showed that adjectives “constitute a more fluid, less autonomous category” (1988: 64), see Tribushinina et al. (2013) for a crosslinguistic study. In an experimental study, Polinsky (2005) found out that adult Heritage Speakers (HSs) of Russian perform poorly on adjectives, unlike monolingual controls. The differences in terms of reaction times, accuracy of translation, and the use of compensatory strategies when a lexical item is not known suggest that Russian HSs have an asymmetric knowledge of word classes. As the results resemble those obtained on adjectives in uninterrupted acquisition, where they tend to be acquired late, Polinsky’s conclusion is that adjectives play less of a role in the architecture of grammar than the two other core categories, nouns and verbs, see also Zyzik & Azevedo (2009) for L2 learners. Adjectives are also shown to differ from purely functional elements, e.g. articles, in that agreement on adjectives is acquired after agreement on determiners in several languages (Marsical

2009, Mastropavlou 2006). Adjectival agreement is also processed differently by monolingual speakers of German, Hopp & Lemmerth (2018) and HSs of Polish, Fuchs (2019).

**Our study:** We collected data from two age groups of HSs of Greek in the US and Germany and monolingual controls via a narration task of a video presenting a fictional accident. The task did not explicitly target the production of adjectives. Data were collected from N=27 adult HSs-Germany, N=21 adolescent HSs-Germany, N=31 adult HSs-US and 32= adolescent HSs-US, N = 32 monolingual adults and N= 32 monolingual adolescents in two different modalities (oral and written) and two communicative situations (to a close friend, *informal*, and to the police, *formal*) (Wiese 2017).

**Results:** a) HSs produce less adjectives than monolinguals. b) Both monolinguals and HSs produce more adjectives in the formal than in the informal register (Monolinguals: formal =330, informal =159, Germany: formal =263, informal =155, US: formal = 251, informal =190). c) US HSs produce agreement errors: we find both matching agreement between nouns and articles and agreement mismatches with adjectives in gender, (1), as well as the reverse pattern. US HSs also show novel patterns, e.g. wrong declension class for adjectives, (2):

- |     |         |                 |        |     |             |           |
|-----|---------|-----------------|--------|-----|-------------|-----------|
| (1) | mia     | alo             | gineka | (2) | alos        | meros     |
|     | one.FEM | other.NEUT/MASC | woman  |     | other.DC1/7 | place.DC7 |

Our (a-b) results support Polinsky's (2005) claim for Russian HSs that adjectives are a characteristic of the literary language and HSs may lack knowledge of this specific register, which explains the fewer production of adjectives by HSs. The agreement patterns, however, point to a problem with morpho-syntactic cues, providing a good testing ground for theories of agreement and concord and the selective category bias. Building on Fuchs (2019), failure of agreement in (1-2) suggests a) differences between concord in the nominal domain and agreement in the clausal domain, and b) differences in the categorial status of adjectives.

## Adjective versus Ideophone in an African language, a typological problem

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Keywords: Adjective, Ideophone, Adverb, Gbaya, Niger-Congo

Gbaya is an isolating language which has very little morphology and no agreement at all (no gender or number, only for personal pronouns). It is a tonal language with two levels and four tones. The word order is very strict.

By contrast with languages where adjectives are rather a noun or a verb, Gbaya has, besides verbs—there is a clear distinction between nouns and verbs—(10% of the lexicon—counted from the dictionary published in 2009 which contains 7071 items) and nouns—in the lexicon, there are very few derived terms opposed to compound terms that are very numerous—(50% of the lexicon), a lot of adjectives (32,6% of the lexicon). Adjectives are distributed over three sub-categories: primary adjectives (A) with 21 items, verbal adjectives (VA) with 167 items derived from a verb and adjective-adverbs (AA) with 2141 original terms (30% of the lexicon). All adjectives can be nominalized by supporting the suffix *-à* 'NMLZ' and are characterized in attributive function by being placed before the noun they determine. In all the other uses as placed after a noun in an attributive, introduced by the

verb ʔó “be” in a predicative function, or with any verb in an adverbial function, AAs are used without any modification while As and VAs have to be nominalized and introduced by the preposition *nè* “as” to be used, but in the end all of them can play the same syntactic roles, as illustrated in the next table.

ADJ	A (primary adjective)	VA (derived adjective)	AA (adjective-adverb)
Attributive function			
ADJ N	mbé      tùà new      house	gásá      tùà large      house	kóngóró      bíá very_small      grasscutter
	A new house	a big house	a very small grasscutter
N ADJ	tùà      nè      mbéà hous      as      new.NM e      LZ	tùà      nè      gásáà house      as      large.NMLZ	bíá      kóngóró grasscutter      very_small
	A new house	a big house	a very small grasscutter
Predicative function (placed after the V ʔó “be”)			
tùà      ʔó      nè      mbéà hous      INAC.      as      new.NML e      be      Z	tùà      ʔó      nè      gásáà hous      INAC.      as      large.NML e      be      Z	bíá      ʔó      kóngóró grasscutt      INAC.      very_sma er      be      ll	
The house is new		The house is big	The grasscutter is very small
Nominalization of all ADJ (NMLZ)			
ADJ -à	mbéà “the new”	gásáà “the big”	kóngóróà “the very small”

Table.1 Main functions of Adjectives

Semantically, all adjectives are descriptive and depictive, but differently depending on their type. Primary adjectives which express a prime state and verbal adjectives which express a resulting state are complementary, while adjective-adverbs express a wide range of meanings, some combining two semantic features, some integrating the expression of the degree and some being specific to a referent. Table 2 illustrates the expression of “large, big” by all these ADJ.

Cat.	Term	meaning	spécification
A	<i>gbà</i>	great	essential value
AV	<i>gásá</i>	large, big	resultative derived from V “grow”
AA	<i>rùkpùtù-rùkpùtù</i>	too large or too big	degree
AA	<i>tàlàngàzàṅ</i>	big	spécific of a child of 10-12 years old
AA	<i>hèr-ngèzèṅ</i>	large and tall	2 values
AA	<i>kpéngém</i>	not so large and straight	2 values
AA	<i>zòlòbòbò</i>	big et heavy	2 values

Tab.2 The expression of “large, big” en gbaya

Linguists working on Gbaya have also pointed out the importance of these adjectives-adverbs (cf. Noss for Yaayuwèe, Samarin for Gbèya), but focusing on the phonosemantics of their forms, they claim that they are ideophones and then, they exclude them from adjectival category. Considering ideophones as “a class of words on a par with nouns and verbs has become widely accepted in grammar-writing, though still less often practiced than preached (Ameka, Dench & Evans 2006).” (Digemansè, 2018: 30). Moreover “Ameka (2001) points out based on data from Ewe, the inclusion or exclusion of ideophones has major implications for the typological generalisations that can be made. It affects the placement of Ewe on the verbal versus adjectival continuum: if ideophones don’t count,

Ewe is more on the verbal side of the typology, whereas if they do, Ewe becomes the adjectival type.” (Digemanse, 2018: 16).

My paper will show that Gbaya AAs have all the specific properties that allow a definition of their categorial status as Adjectives with both functional and semantic properties. The depictive performance attributed to ideophones is part of descriptive role of any adjective, while the phonosemanticism is not restricted to ideophones in Gbaya. From a semantic point of view, AAs have their own meaning that predicative use brings out, and are not restricted to be expressive in relation to a specific item. They support a very large multiplicity of meanings, opposed to the A which is a closed class limited to prime states, and to VA whose meaning is constrained by their origin as the result of the action expressed by the verb they derived from. Besides all gbaya verbs are processive verbs (there are no state verbs), some TAM forms can express the result of the verb but not as a qualitative meaning the way adjectives do. Moreover, the regular use of AAs as adverbs of manner—there is a class of Adverbs whose status is different from the way adjectives are used as adverbs of manner—is not specific for them, all the other adjectives (A or VA) are also used the same way within a special construction, some of them being very frequent as for example *nè dià* (as good.NMLZ) “well”, *nè dókáà* (as numerous.NMLZ) “a lot”. It is similar to the construction of adverbs ending with -ment in French (poliment, cruellement, etc.).

It is important from a typological point of view not to put aside ideophones when, as in Gbaya, they share the same status as the two other classes of adjectives.

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<b>WORKSHOP 2</b>
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## **Artificial/peripheral structures: What can they tell us about the (morpho)phonology of natural languages**

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**Keywords:** artificial language learning, nonce words, language periphery, constructed languages, morphophonology (morphology-phonology interface)

Linguists' endeavor to model speakers' internal grammatical knowledge is often hampered by the opacity of the linguistic data. This opacity, which "blurs" the underlying structures/rules/processes that may be responsible for a certain surface form, is usually the outcome of a wide range of extra-grammatical factors (e.g. lexical frequency, pragmatic context, diachrony) that exert a significant effect on the grammatical system, thus making its outputs less predictable and less transparent.

In order to avoid this interference and get a clearer picture of the (morpho)phonological biases that guide speakers' behavior, a great body of phonological research has shifted its focus from "conventional" data (i.e. actual words well-established in the lexicon of a language), which, more often than not, have undergone some kind of extra-grammatical influence, to structures that could provide direct insight into speakers' internal grammars. These structures fall into three main categories:

- a) Artificial structures that are developed by researchers themselves and are used as experimental material to elicit speakers' response to new data. The idea is that when speakers are asked to process pseudowords or pseudostems they have never encountered before, they access directly their grammatical knowledge without being influenced by any extra-grammatical variable. The goal of presenting the speakers with these nonce words is usually to test whether they are able to apply (morpho)phonological rules (that are taken to be part of their grammar) to novel forms (e.g. Berko 1958; Bybee & Moder 1983; Prasada & Pinker 1993; Albright & Hayes 2003; Becker et al. 2017; Ahyad & Becker 2020) or whether they are able to identify systematic patterns in the data and acquire artificial mini-grammars (e.g. Pycha et al. 2003; Peperkamp et al. 2006; White 2014; Finley 2017; White et al. 2018; Martin & Peperkamp 2020).
- b) Peripheral structures that are often used by specific groups of speakers and are not part of the standard lexicon of a language. The research in this field has focused, among others, on blends (e.g. Bat-El & Cohen 2012; Moreton et al. 2017; Schoenfeld et al. 2019), truncations (e.g. Piñeros 2000; Alber & Arndt-Lappe 2012), binomials (e.g. Benor & Levy 2006; Ryan 2019) and language games (e.g. Vaux 2011; Krämer & Vogt 2018). Given that, in most of these cases, speakers do not act just as language users but also as language "designers", these structures offer a direct insight into speakers' biases and intuitions.
- c) Constructed languages (con-langs) and names that have been developed to serve practical (e.g. Esperanto, van Oostendorp 1999) or artistic needs (e.g. fictional languages such as Klingon and Dothraki, Destruel 2016; Pokémon names, Kawahara et al. 2018). Like peripheral structures, they

are the product of speakers' linguistic innovation and therefore can provide a window to what drives speakers' choices.

The proposed workshop aims at bringing together scholars working on the (morpho)phonology of all these different kinds of artificial/peripheral formations. Our objective is to provide a stimulating environment to share related work and expertise, exchange ideas, and discuss the current status and the future prospects of the role of artificial and peripheral structures in linguistic research. The expected outcome will be a state-of-the-art exploration of the field that will advance our knowledge on language periphery and will highlight the importance of nonce words and artificial grammars as research tools.

More specifically, the workshop plans to address (but is not limited to) the following research questions:

1. Why is it important to include artificial/peripheral formations in the study of language and, specifically, in phonological research?

The workshop is anticipated to stress the significance of artificial and peripheral structures, not only as a flourishing field of study but also as a valuable tool in research methodology. These structures do not just shed light on the building blocks that comprise speakers' internal grammars, but also provide information about the productivity and the "strength" of the internalized rules and representations. Furthermore, artificial experimental material (nonce words and artificial grammars) allows researchers to manipulate the linguistic input the subjects are exposed to in a controlled fashion.

2. How do artificial/peripheral formations help us deepen our understanding of how natural languages work?

The contributions in the workshop are expected to provide empirical and experimental evidence that will allow us to draw important generalizations and conclusions about how language is represented and processed in the human mind. For example, some of the papers on artificial language learning are anticipated to offer new insights on the well-known debate as to whether the emergence of certain phonological phenomena is driven by phonetic (channel bias) or cognitive (analytic bias) factors (Moreton 2008).

3. How should artificial experimental material be designed in order to accurately reveal speakers' intuitions?

There are a lot of different factors one should consider when designing nonce words for experimental purposes. For instance, one of these factors is the effect of the L1 lexicon. Nonce words should not closely resemble any actual word in the lexicon of the subjects' L1, but at the same time they also need to sound natural. In an experiment where all subjects have the same L1, techniques to achieve this fine balance are possible (e.g. Revithiadou & Lengeris 2016), but this requirement is more challenging to be met in cross-linguistic studies that aim at revealing universal biases (e.g. White et al. 2018).

Our provisional list of participants includes renowned scholars with significant work on this field, as well as young researchers that will be given the opportunity to contribute with their own fresh insights. Their contributions span a wide range of – typologically diverse – languages (Cantonese, English, Flemish, French, German, Greek, Hebrew, Italian, Norwegian, Esperanto), topics (e.g. blends, truncation, exceptional colloquial patterns, binomials, expletive affixation, contact-induced hybrid grammars, nonce words, artificial language learning, constructed languages), grammatical structures/phenomena (e.g. segment inventory, word-final devoicing, stress, tone, prosodic structure, metrical parsing, headedness, inflectional paradigms, word order), and research methods (e.g.

theoretical analysis, diachronic study, corpus analysis, experimental procedures, computational models, crowdsourcing). We are confident that this diverse list of contributions, which is expected to be enriched during the third call for papers, will result in a highly successful and fruitful workshop.

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## **Truncation, clippings and blends: Universal structures and their variation**

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Keywords: truncation, blends, clippings, prosodic morphology, variation

Truncation (*Robert* > *Rob*, *sister* > *sis*) and blends (*police* + *officer* > *pófficer*) have been shown to provide a unique window to the relevance of prosodic structures in word-formation (Bat-El 2019, Piñeros 2004). It seems that across languages such patterns make reference to a universal pool of prosodic categories and prominent positions in the word(s) they are derived from: truncation often takes the templatic form of a foot and anchors to initial, final or stressed syllables of its base (Alber & Arndt-Lappe 2012); blends are often formed by preserving the initial part of the first and the stressed and final part of the second base word (Arndt-Lappe & Plag 2013, Beliaeva 2019). Yet, truncation and blending patterns also vary across languages, as well as in the same language, creating to the naive eye the impression of arbitrariness.

Focusing on variation within the same language, we show in our contribution that variation in truncation and blending is far from arbitrary. We illustrate this with data from English, German, Italian and French, in part elicited via crowd-sourcing. Variation in truncation correlates with factors such as age of the pattern, geographical distribution and pragmatic function (e.g. degrees of closeness). Variation in blending, by comparison, seems surprisingly constrained. We argue that this is due to the fact that, unlike truncation, blends do not serve a large variety of pragmatic functions. Within semantically defined patterns (Beliaeva 2014), the variation can to a large extent be explained by the prosodic structure of contributing base words and of the blending language itself.

In conclusion, we argue that variation in truncation and blending is theoretically interesting because it allows us to study how universal factors (like psycholinguistic and prosodic prominence)

interact with language-specific needs of word-formation systems to express (pragmatic and semantic) meanings.

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QoTeT paradigm migration in Modern Hebrew: A minor pattern with major implications

Noam Faust  
<not updated>

## Weight effects in Greek? Insights from binomials

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Keywords: End-Weight, binomials, word-order, frequency, gradient weight

Prosodic End-Weight refers to the tendency of prosodically heavier items to appear in positions closer to the end of a phrase or sentence (Ryan 2019), possibly to coincide with nuclear phrasal stress (Anttila 2008; Anttila et al. 2010). Studies on coordination in binomial structures (Cooper and Ross 1975), indicate that some phonological properties that can be associated with the second slot in an irreversible binomial structure of the type A and B (e.g. *salt and pepper*), are lowness and backness in vowels (*this and that*), greater syllable count (*bow and arrow*), as well as coda effects, with codas contributing to weight appearing in the constituent of the second position (Oakeshott-Taylor 1984; Benor and Levy 2006; Mollin 2012; Ryan 2019).

To date, End-Weight-related manifestations have not been argued for Greek. But this is a distinct possibility in the light of observed quality effects in patterns of echomimetic ablaut structures, like [din dan] or ['platsa 'plutsa], syllable-count effects in fixed expressions like “ήθη και έθιμα” [‘iθi ce ‘eθima] ‘customs’, while final closed syllables have been found to be more likely to attract stress in acronym stress assignment experiments (Topintzi and Kainada 2012; Revithiadou et al. 2015).

The current study seeks to experimentally investigate this possibility and explore the phonological aspects that can potentially determine word order under coordination in Greek, focusing

on the potential effects and presumed legitimacy of vowel quality, syllable count, and final-syllable coda status on the ordering of constituents in Greek binomials. Following the methodology of Bolinger (1962), Oakeshott-Taylor (1984), and Parker (2003), the experimental model includes two forced-choice tasks, whereby participants indicate their preferred constituent order (A and B or B and A). While the first task utilizes random pairings of words derived from the Greek lexicon, the second employs nonce words, after Pinker and Birdsong (1979), Parker (2003), and Ryan (2019), aiming at completely eliminating any semantic effects, and grasping better phonological control of word structure, through the creation of minimal pairs.

The results indicate that there are indeed effects of vowel backness for the nonce word task, while significant effects derive from both tasks for the word length and the coda parameter. These results, in accord with Ryan's (2019) predictions for prosodically heavier constituents, suggest that, in Greek, words with back vowels, more syllables, or word-final codas are more preferred closer to the right edge, in positions of nuclear phrasal stress, a conclusion which is especially interesting for Greek, a weight-insensitive system (Drachman and Malikouti-Drachman 1999). The motivation behind this preference is contemplated considering issues such as frequency and markedness. The study concludes that while the approaches examined cannot fully account for the present findings, and the status of the stress-weight interface currently remains undetermined for the language, Greek potentially becomes relevant to the discussion on gradient weight systems (Ryan 2011; Garcia 2017) and the stress-weight interface (Gordon 2006).

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## **Nonce words in research on language contact-induced hybrid grammars: Brussels French**

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Keywords: phonology, loanwords, Germanic-Romance contact, experiment, nonce words

In situations of language contact, extralinguistic factors like demography and geography exert a considerable influence on linguistic forms (Jones & Esch 2002). For example, Kokkelmans (2019) provides evidence for a regular pattern in the pronunciation of Flemish (Dutch) placenames by bilingual native speakers of Brussels French: placing the stress on the last syllable of a placename, i.e. applying French stress to a Flemish word with non-final stress, correlates with the percentage of French-speaking inhabitants of that place (demographic influence) and with its proximity in kilometres from the (mostly French-speaking) city centre (geographical influence). It results that the probability of adaptation of a given placename, rather than being determined by strictly phonological principles, is dependent on real-world knowledge and therefore word-specific.

Neutralising such extralinguistic interferences is crucial for research focused on the purely linguistic aspects of adaptation patterns. To counteract these interferences, this contribution analyses the (non-)adaptation of Flemish proper names in Brussels French with nonce rather than existing words. With non-existent but phonologically well-formed words, bilinguals cannot be influenced by real-world experience e.g. by having heard a given word more frequently with Flemish stress.

This study, based on data collected by Kokkelmans (2020), determines the implicational hierarchy of phonological loanword adaptation (see e.g. Holden 1976; Itō and Mester 2008; Kang 2011; Hsu and Jesney 2017) from Flemish to Brussels French and explains its structure. In such an implicational hierarchy, a loanword with features A and B which both differ in the languages (e.g. the nonce *Tervlaeren* with (A) Flemish second-syllable stress vs. French final stress (B) Flemish apical /r/ vs. French uvular /r/) can be realised with both features preserved (Flemish stress and /r/), with both features nativised (French stress and /r/) or with A preserved and B nativised (Flemish stress and French /r/), but *not* with B preserved and A nativised. The study consists of an online perceptual rating task in which 22 native Brussels French bilinguals evaluated the acceptability of hybrid nonce Flemish proper names (A preserved vs. B nativised and inversely) in French sentences. The features were: Flemish stress, [h], [x], [ŋ], [r] and non-nasalised /VN/ sequences.

Results show that contrarily to claims in the literature that Flemish proper nouns are pronounced “the Flemish way” in Brussels French (Pohl 1983; Cassano 1993; Hambye 2005; Francard 2017), hybrid forms conforming to the hierarchy (A preserved, B nativised) are widely accepted (74.8%). The resulting implicational hierarchy is ( $p < 0.001$  for 13/15 comparisons):

[r] ⇒ [h] ⇒ stress ⇒ [ŋ] ⇒ [x] ⇒ non-nasalised /VN/

where the preservation of a feature implies that of all on its right. Two explanations for this hierarchy are addressed:

- The ability of native French speakers to produce the features (Hsu and Jesney 2017: 257)
- The phonological reduction of the features in Flemish varieties

The results are only partially compatible with the former and more consistent with the latter explanation: substandard Flemish varieties also tend to eliminate the leftmost features on the scale (Sebregts 2014; Donaldson 1983).

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## Artificial Language Learning experiment shows that native Norwegian speakers avoid word-final voicing

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**Keywords:** phonology, artificial language learning, final voicing, Norwegian, phonological bias

**Overview:** Word-final *devoicing* (DEVOICING) is typologically common and phonetically natural (Harris 2009, Redford and Diehl 1999). Word-final *voicing* (VOICING) is typologically uncommon and phonetically unnatural (Beguš 2018).

**Question:** is phonetic naturalness sufficient to explain why VOICING is rare (a *channel bias*), or is there also a cognitive constraint against it (a *learning bias*)? *Substance-free phonology* (Hale & Reiss 2000, Blevins 2004) argues that phonetic effects are sufficient in themselves, while approaches that argue phonology is grounded in phonetics (e.g. Hayes et al. 2004) indicate that phonological explanations are also necessary. **Method:** The question was investigated using ALL experiments. Participants were tested on the acquisition of DEVOICING compared to VOICING. **Results:** While participants were able to produce the correct final obstruents for both languages, however for VOICING participants preferred not to alternate between voiceless and voiced obstruents, and chose mostly voiced obstruents throughout the paradigm. For DEVOICING participants preferred the alternation. In Experiment 1 (N=36) the stimuli was created using MBROLA. Here the stressed vowel was marked with duration, but duration was otherwise kept constant for final obstruents. In Experiment 2 (N=30) natural stimuli was used. This was recorded in carrier sentences

	Alternating (75%)	Non-alternating (25%)
DEVOICING	rusúbu (pl.) – rusúp (sg.)	lisítu (pl.) – lisít (sg.)
	nóbu (pl.) – nop (sg.)	síku (pl.) – sík (sg.)
VOICING	rusúpu (pl.) – rusúb (sg.)	lisídu (pl.) – lisíd (sg.)
	nópu (pl.) – nob (sg.)	sígu (pl.) – sig (sg.)

**Exposure phase:** participants heard singulars and plurals in pairs and repeated them.  
**Production phase:** participants heard either a

plural or a singular and was asked to produce the corresponding form. **Forced-choice phase:** participants were asked to choose between two forms of the word (either singulars or plurals).

**Results:** A significant difference between the language conditions when participants were tested on the plurals ( $z=-3.29$ ,  $p<.01$ ).

	Singulars	Plurals
DEVOICING	rusup (as expected)	rusubu (as expected)
VOICING	rusub (as expected)	rusubu (unexpected)

I call this the *Alternation Asymmetry*. Participants in VOICING avoided the *rusupu-rusub* alternation between the

intervocalic voiceless obstruent and the final voiced obstruent.

**Discussion:** I argue that the *Alternation Asymmetry* is a consequence of a *learning bias* against VOICING. A *channel bias* would not be able to explain how similar results were found both for production and the forced-choice task. The constraints against VOICING must be part of the phonological grammar. Further, I argue that the explanation for the asymmetry is likely due to a high starting ranking of OO-faithfulness (Do, 2018) which favors uniform paradigms. For the natural language the input is sufficient for learners to acquire the intended alternation, but for the unnatural language learners are not able to rank the NATURALNESS-constraint above the OO-faithfulness constraint. **Current running experiment:** Transmission of VOICING and DEVOICING across simulated generations to see if the pattern observed holds over generational transmission.

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**Gradient phonological similarity in blend formation**

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Key words: blend, portmanteau, phonological similarity, Gradient Harmonic Grammar, Greek

In this article we investigate the phonological conditions that determine blend formation in Greek and other languages (e.g., Spanish, English) (e.g., Algeo 1977, Kubozono 1990, Piñeros 2000, 2002). We focus on *portmanteaus*, which are formed through the concatenation of truncated components of existing words, provided they exhibit phonological similarity (Kelly 1998). The blended word has compositional semantic content (1a–c), but outputs with phonological overlap and nonce semantics are also possible (1d):

- |     |  |  |                |
|-----|--|--|----------------|
| (1) | <i>Portmanteaus</i>                    | <i>WD1 &amp; WD 2</i>  |                |
| a.  | la'dronals<br>'McDonalds as a rip off' | < [la'dron] & [mak'donals]<br>'thief' 'McDonalds' (Piñeros 2000) | <i>Spanish</i> |
| b.  | baɪ'kejd<br>'bar and arcade'           | < ['baɪ] & [aɪ'kejd] (Schoenfeld et al. 2019)<br>'bar' 'arcade'  | <i>English</i> |
| c.  | 'seksali<br>'mad for sex'              | < ['seks] & [e'ksali]<br>'sex' 'enraged'                         | <i>Greek</i>   |
| d.  | dzi'pura<br>'no meaning'               | < ['dzip] & [tsi'pura]<br>'jeep' 'sea bream'                     |                |

The head in portmanteaus (usually WD2) determines the morphosyntactic (and semantic) features of the output structure, as well as its size and stress (Piñeros 2002, Trommer & Zimmermann 2010, 2012). According to T&Z (2012), the source words are fully prosodified when combined. Moreover, the blended construction results from a compromise between the need for all segmental material to be integrated under the prosody of the head (HEADDOMINANCE) and, at the same time, the requirement to preserve material from the non-head component (MAXS<sub>NonHead</sub>). In this article, we probe into an issue that has not received much attention in the literature (see, however, Bat-El 1996, Schoenfeld et al.



## **The necessity of modelling lexical effects during artificial language learning paradigm**

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Keywords: Artificial Language Learning, Naive Discriminative Learning, Analogical Learning, Learning Bias, Lexical Statistics

Artificial language learning research (ALL) revealed that learners show phonological biases towards certain artificial language patterns driven by a universal mechanism. Despite the fact that universality calls for cross-linguistic evidence such as White et al. (2018), most studies report data of only one L1 population due to restrictions in designing an artificial language compatible with multiple L1s (see Figure 1). This study fills an important gap in ALL by demonstrating (a) the need to model the influence of both the L1 and the artificial language (AL) on the learning bias and (b) how this can be done while simplifying the procedure of the artificial language's design.

In an artificial language learning study participants were exposed to pseudowords, half of which exhibited an identity pattern and half of which exhibited a non-identity pattern. In a testing phase they were asked to endorse new pseudowords. We replicated the preference for a consonant identity pattern (CaVCaV) over a non-identity pattern (CaVCbV) in nonwords previously found in English (Linzen and Gallagher, 2017) for native speakers of German ( $n = 232$ ) and Mandarin ( $n = 219$ ). By training an analogical (Nosofsky, 1986) and a discriminative learning model (Milin et al., 2017) over the lexicons of the L1 and the AL we were able to capture their influences in the learning of the AL. The more similar nonwords are to L1 words, the more likely they are to be rejected as grammatical words of the AL. Conversely, the more similar nonwords are to the exposed AL words, the more likely they are to be accepted as grammatical words of the AL. Nonwords are less likely to be accepted as grammatical if the decision takes longer or it was judged at a later time.

Our findings (Tang & Baer-Henney, under review) show that we are at risk of underestimating the role of the lexicons (L1 and AL) in ALL. We demonstrated that incorporating lexical statistics as covariates will enable us to truly disentangle individual language group effects from universal learning biases. Our approach alleviates the need for using one set of items for all the languages under investigation (White et al., 2018) as well as the need for control groups.

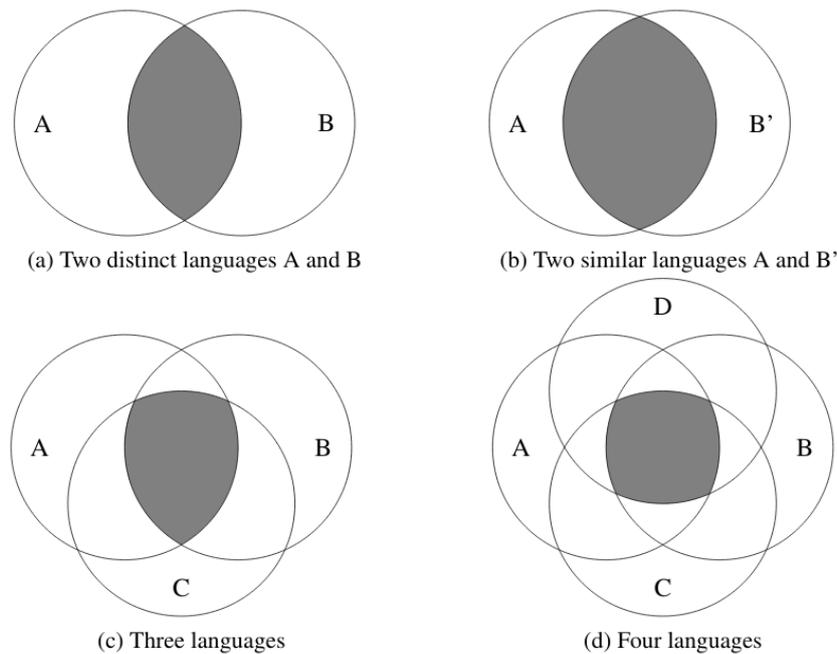


Figure 1: Decreasing phoneme overlap (gray area) as more languages (circles) are taken into account

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Esperanto Phonology As A Large-Scale Linguistic Experiment

Marc van Oostendorp  
<not updated>



<b>WORKSHOP 3</b>
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## **Building modality with syntax: Focus on Ancient Greek**

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Keywords: corpus study, moods, negation, particles, subordination

General discussion on modality has covered topics pertaining mostly to semantics and pragmatics including (a) the relevant semantic categories involved (“dynamicity”, “possibility”, “necessity”: van der Auwera & Plungian 1998, Nuyts 2016; “evidentiality”: Squartini 2016); (b) the role of clause polarity (factuality vs non-factuality: Kiefer 1997, Declerck 2011) and the correlation with speech acts (Narrog 2012a); (c) the pragmatically-oriented notion of “speaker’s attitude” (Palmer 1986; Nuyts 2005; see also the notion of “subjectification” in language change, cf. Traugott 2010, Narrog 2012b).

Ancient Greek (AG) is an interesting test bench for investigating modality and scholarship has dedicated studies to its rich system of moods (recently, Rijksbaron 2006, Willmott 2007), modal particles (Basset 1988, Gerö 2000, Beck et al. 2012) and modal verbs (Ruiz Yamuza 2008; Allan 2013), but also to the interaction of verbal moods with several modal adverbs and particles, e.g. ἴσως (*ísōs*), τάχα (*tákha*) (Ruiz Yamuza 2001; Conti 2019), τυχόν (*tukhón*) (Denizot & Vassilaki 2017), ἤ (*ê*) and ἄρα (*ára*) (La Roi 2019). The list of “modal-oriented” grammatical devices is longer and may include e.g. indefinites and negation. Recent studies suggest that “modal meanings could be available for all syntactic categories and at all the different levels of syntactic structure” (Arregui et al. 2017: 18).

All these categories may play a role in shaping modality but the way they interact and influence each other for building modal meanings has still to be explored in a more syntactically-oriented perspective. In AG linguistics, the interaction of multiple “modal-oriented” grammatical devices has been recently explored by Drummen (2013) on ἄν (*án*) + optative within the constructionist framework, Revuelta Puigdollers (2017) on result clauses in a distributionist approach, and Denizot et al. (forthcoming) on temporal clauses with ἄν (*án*) in a contrastive study on three stages of AG. The way different devices jointly contribute to create a specific modal meaning can thus be captured at the clause-level; the modal meaning in turn influences the meaning of its components (sub-clauses, reference of the indefinites, scope of the negation among others).

The aim of this workshop is to encourage corpus-based studies devoted to the syntax of modality in AG, within different theoretical models. All stages of AG from Archaic to Hellenistic Greek, including all types of texts, literary and non-literary, are within the scope of the workshop.

### **Issues to approach**

#### 1) The nature of factors involved

a) Verbal categories (e.g. aspect and tense) are not the only contributors to modality. More specific attention should be given to indefinites, negation, or a wide range of particles, e.g., as regards their interaction with other modal means.

b) These interactions are also syntactically-conditioned by the nature of the clause in which they appear (main vs subordinate clause, types of subordinate clauses, etc.).

2) The way the different factors interact

a) Is the interaction between different parameters a rule or a tendency? We need to investigate which factors are compulsory in interaction with others, which ones are possible, which combinations are unattested.

b) ‘Interaction’ is a practical but imprecise term that needs further elaboration. Is it relevant to consider that the interaction between different modal factors creates collocations or constructions, and if so, how? Which factors influence or condition the other(s) in building modality? How does the modal meaning of a clause influence the meaning of its components?

3) Role of different types of variation and language change

a) Synchronic and diachronic approaches to AG are equally welcome. Contrastive studies between different stages of Greek can also help to shed light on structural differences in the way modality is built at different synchronic layers.

b) Other factors such as sociolinguistic and dialectal variation, types of texts, e.g. literary vs non-literary may nuance our approach to AG.

4) Reflection on the relevant methodology

AG can be approached through a corpus, which is closed but large and with diverse and clearly defined types of text. It has also benefitted from a long and rich grammatical tradition. Corpus-based studies on AG allow us to test different theoretical frameworks and to evaluate the relevance of different concepts to describe and understand the way modality is built syntactically. This kind of approach should bring new knowledge to AG but also to general linguistics.

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### **Modal uses of knowledge verbs in Ancient Greek**

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Keywords: modality, Ancient Greek, knowledge verbs, modal auxiliaries, syntax-semantics interface

Knowledge verbs are propositional attitude predicates that tend to interact with modality. A knowledge verb in its fundamental meaning (“know that”) conveys epistemic modal meaning. In some languages, moreover, “know” appears to express a kind of root dynamic modality (“know how”), e.g. Italian *sapere*, Modern Greek *ksérō*, Russian *umet’*. In this use, “know” displays syntactic properties of modal auxiliaries, in particular the possibility of selecting a same-subject infinitival complement that is transparent to operations such as clitic climbing. Historically, this can cause reanalysis: English *can*, for instance, originates from a verb meaning “know” (*cunnan*); the path from knowledge verbs to the expression of dynamic modality is well-attested crosslinguistically (Bybee et al. 1994, van der Auwera & Plungian 1998, Heine & Kuteva 2002: 186, Gisborne 2007).

We investigate the properties of knowledge verbs in Ancient Greek, which have some uses semantically and syntactically close to those of modal verbs (Cristofaro 2008, 2012). In (1a-b) *oïda* has its full lexical meaning “possess information” and the complement clause has a participle: the complement and the matrix clause share the same subject in (1a) and have different subjects in (1b).

- (1) a. *ou gàr oïda despótas kektēménos*  
 not in.fact know:IND.1SG master:ACC.PL get:PTCP.NOM.SG  
 “in fact I am not aware that I have masters” (E. *Hec.* 397)

- b. *toùs philtátous gàr oïda nôin óntas pikroús*  
 the:ACC.PL closest:ACC.PL in.fact know:IND.1SG us:DAT.DU be:PTCP.ACC.PL hostile:ACC.PL  
 “in fact I know that our closest kin are bitterly hostile to us both” (A. *Ch.* 234)

In (2) *oïda* has instead the dynamic modal meaning “be able to” and the complement is a same-subject infinitival clause:

- (2) *oïd’ epì dekxiá, oïd’ ep’ aristerà nōmēsai bôn*  
 know:IND.1SG to right know:IND.1SG to left direct:INF shield:ACC.SG  
 “I know well how to wield to right, and well how to wield to left my shield” (Hom. *Il.* 7.238)

The verb *epístamai* shows a similar behaviour:

- (3)a. *pròs pólin... epístamai sthénousan hékōn*  
 to city:ACC.SG know:IND.1SG powerful:ACC.SG come:PTCP.NOM.SG  
 “I know that I have come to a city that has great power” (S. *OC* 733)

- b. *tòn sòn ... paída sōphronoûnt(a) epístamai*  
 the:ACC.SG your:ACC.SG son:ACC.SG be-wise:PTCP.ACC.SG know:IND.1SG  
 “I know that your son is wise” (E. *Fr.* 1067.1)

- (4) *pâsa ... agathē gunē ... sōphroneîn epístatai*  
 all:NOM.SG good:NOM.SG wife:NOM.SG be-wise:INF know: IND.3SG  
 “Every good wife knows how to be wise” (E. *Fr.* 909.3)

We collect complementation patterns of three knowledge verbs in Ancient Greek, *oïda*, *epístamai*, *gignōskō*, from selected Archaic and Classical Greek literary texts in the TLG database, in order to discuss the syntactic differences lying behind the epistemic / dynamic contrast and the role of grammaticalization. Our study is expected to bring new insights into general issues at the syntax-semantics interface such as obligatory control (a feature of dynamic as opposed to epistemic “know”) and diagnostics on clause size in the case of non-finite complementation.

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## **Syntactic expressions of modality: Optatives and ‘optatival constructions’ in the Greek of the Gospels**

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**Keywords:** syntax, modality, optative, New Testament Greek, historical linguistics

### **Research questions**

It is generally agreed that the optative, which is employed to encode modal distinctions in Greek (*CGCG:441ff.*), is in decline in the language of the New Testament, where only 68 out of 28,121 verb forms are optatives (BOYER 1988:140). However, it is still unclear whether the optative is replaced by other verbal forms in the same syntactic constructions, or whether there is a decline in the constructions themselves. At the same time, how are the modal values that were encoded by the optative in pre-koiné Greek expressed in the Greek of the Gospels? What kind of change did ‘optatival constructions’ undergo?

### **Data**

We will consider two datasets:

1. Optatives in the Gospels (gathered through the PROIEL Treebank, and checked against *variae lectiones* on the NT critical edition).
2. ‘Optatival constructions’, *i.e.* those syntactic constructions that generally require the optative in pre-koiné Greek (gathered manually).

### **Approach and method**

Optatives will be classified not only according to the traditional grammatical distinctions (‘optatives of wish’, ‘secondary optatives’, etc.) but also in light of theories of modality (*e.g.* NUYTS – VAN DER AUWERA 2016, GROSZ 2012, PORTNER 2009). We will also evaluate whether a distinction between strong/performative and weak/desiderative optative (DOBRUSHINA 2011) holds for NT Greek.

We will give particular attention to Luke’s Gospel, which has a relatively high concentration of optatives. In addition, parallel passages in the three synoptic Gospels will reveal alternative syntactic strategies for the expression of ‘optatival’ values.

### **Expected conclusions**

This study will reveal patterns of synchronic variation and diachronic change in the syntax of modality in post-classical Greek. In particular, we expect that the former can be an invaluable tool to understand

the latter. This analysis will also shed light on the decline of a grammatical category and on its interaction with competing morphosyntactic strategies.

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## Completive ὅτι vs ὡς as mark of evidentiality in Ancient Greek. synchrony and diachrony

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Keywords: Ancient Greek, Evidentiality, Completive clauses, Synchrony, Diachrony

Our study deals with the semantic difference between two types of subordinate clauses depending on *uerba dicendi*. Traditional handbooks of Ancient Greek (e.g. Kühner-Gerth 1904<sup>3</sup>: 356, Humbert 1960<sup>3</sup>: 184-185) and many other studies and general descriptions (e.g. Neuberger-Donath 1982, van Emde Boas et al. 2019 506) state that between completive subordinate clauses introduced by the conjunction *hóti* and those introduced by the conjunction *ho:s* differ in the following way: the former conveys the information given by the subject of the main sentence without any additional judgment from the narrator, while the latter implies that the narrator takes some distance from the factuality of the event described in the subordinate clause and does not necessarily assume the opinion of the subject of the main sentence. This difference can be interpreted in terms of evidentiality (Van Rooy 2016).

Other manuals, on the other hand, do not even mention this difference (e.g. Rijksbaron 2002<sup>3</sup>) and others even seem to reject it (Schwyzer 1950: 664).

Moreover, even the specialists who accept the existence of this opposition assume that it had already disappeared by the 2<sup>nd</sup> century BCE.

The current state of our knowledge therefore raises several questions:

- i) Can this difference between *hóti* and *ho:s* be systematically traced in corpora other than Plato, at the Classical period, (the sole author systematically studied until now, by Van Rooy)?
- ii) Are there signs of weakening of the difference in later times? In other words, is it true that there was a diachronic evolution with respect to this evidential opposition?
- iii) Was this difference still valid for latter authors who imitate the classical, in particular Attic, prose? In other terms, is there further evidence in Atticist writers of this opposition or they were not aware of it? In the first case we would obtain supplementary evidence for the importance of the opposition; in the second, evidence for the absolute disappearance of it in Hellenistic times.

To answer the first question, we will present the results of a research on the language of the classical Attic historian Thucydides. To answer the second, our research has focused on some of the works by Xenophon, who presents clear evidence for the evolution of the Greek prose towards Hellenistic tendencies. To answer the third question, we analyze data from 2<sup>nd</sup> CE authors, as, for example, Plutarchus, who imitated in his style classical prose.

Our results show:

- a) the difference in evidential content between *hóti* and *ho:s* completive clauses is also present in the work of Thucydides and Xenophon, but not in every context and not with any kind of distribution. Therefore, some limitations appear which reduce the validity of previous more general statements;
- b) there is no evidence that late prose, except for some stylistic automatism, reflect that difference.
- c)

As a conclusion, our research offers new information on the synchronic and diachronic conditions and limits of the expression of evidentiality in ancient Greek.

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## Counterfactual conditions in colloquial Ancient Greek

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Keywords: modality, morphosyntax, diachronic changes, synchronic variation, documentary papyri

Counterfactuality in Ancient Greek can be expressed by a wide variety of constructions and detected through different types of registers. This paper deals with counterfactual constructions in documentary papyri which belong to the most relevant sources for the study of the colloquial Ancient Greek. With a wide range of types of texts and a continuity of more than a millennium, they indicate the diachronic development of Ancient Greek as well as more general linguistic trends in everyday contexts (Dickey 2011). Furthermore, they illustrate synchronic variation with respect to other sources and include constructions which challenge traditional structure-based linguistic analysis of historical texts.

Grounding my analysis in a corpus of data from the Hellenistic until the Byzantine period (4th cent. BC – 7th cent. AD), I will discuss the constructions of counterfactual conditions found in the documentary papyri with two goals:

- (1) to investigate the morphosyntactic changes affecting the verb forms with respect to the Classical time and detect the diachronic development of Greek in this timespan;
- (2) to analyze the synchronic varieties in comparison to other types of texts and registers.

The data collation through various papyrological databases will include information about type of text, register and social background of the scribe in order to illustrate whether we are dealing with single scribal choices, dialectal variations, imitation processes of the Classical language use (i.e. Atticism) or more general linguistic phenomena which foreshadow later constructions (Horrocks 2010; Vierros 2020).

The starting point of my investigation is the observation that since the Hellenistic period the bare imperfect starts to be an all-purpose modal device in low-level bureaucratic and private documents. It replaces the Classical construction of the modal particle *án* with the secondary indicative (Horrocks 2007). Moreover, periphrasis involving the use of a modal verb (i.e. *émellon*) and an infinitive arises in the main clause instead of the modal indicative with *án* (Tabachovitz 1943). First, I will explore the interface between semantics and syntax regarding the usage of the modal verb *émellon* in counterfactual conditions (Allan 2013; Danesi et al. 2018). By means of examples, I will illustrate the gradual disappearance of the particle *án* from the construction of the modal indicative, the potential usage of further syntactic elements in the apodosis (e.g. particles) for expressing modality and the extension of functions of the imperfect as a modal device. Considering this usage of the imperfect, I will discuss it from a cross-linguistic perspective as well (Dessi Schmid 2010).

Secondly, I will focus on counterfactual conditions introduced by the formulaic expression *ei mē hóti* (literally *if not that*), which almost only occurs in documentary papyri, addressing function and meaning of the negation *mē* at clause and discourse level (Chatzopoulou 2018) and the role of formulaicity within syntax (Wiechmann and Kerz 2016).

The investigation combines a morpho-syntactic analysis with a pragmatic one in order to show how single linguistic elements or syntactic constructions contribute to build modality at clause level and can make the modal meaning more prominent at discourse level (Nuyts and Auwera 2016).

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## A diachronic syntax of counterfactual mood attraction from Archaic to Classical Greek

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**Keywords:** counterfactuality, mood attraction, morphosyntax, counterfactual mood, diachronic typology

In Ancient Greek the mood of a subordinate clause can be assimilated to the mood of the main clause (to an optative, indicative or, rarely, a subjunctive mood (see Napoli 2014)), a phenomenon called mood attraction. This morphosyntactic phenomenon only received passing notice in standard grammars thus far (Kühner and Gerth 1904, Humbert 1960, Rijksbaron 2006 and van Emde Boas et al. 2019) and recent research (cf. Revuelta Puigdollers 2017a & 2017b). The phenomenon is variously explained, as a mechanical formal phenomenon, a semantic phenomenon (i.e. caused by the main clause verb) or as a combination of these and stylistic factors (see Amigues 1977, 205-224). Thus, mood attraction would benefit from a substantial corpus-based analysis to assess which factors *contribute*, which factors *determine* its occurrence and what the role of cases of mood attraction is for the diachronic development of counterfactuals.

To this end, I conduct a corpus-based analysis of counterfactual mood attraction by comparing Archaic Greek (Homer, Hesiod and the Homeric Hymns) and Classical Greek texts (the three tragedians, Aristophanes, the histories of Thucydides, Herodotus and Xenophon, and the orators Lysias, Isocrates, Isaeus and Demosthenes). First, using a distributionist analysis, I detail not only the various stacked historical layers (Dahl 1997) which generate a counterfactual implicature in main clauses (e.g. im/perfective, pluperfect pasts and potential/wish optatives, deontic, epistemic, boulomaic and dynamic modal verbs and the modal particles ἄν & κε), but also the attracted clause types. I use this data to assess which of these factors *determine* the occurrence of counterfactual mood attraction and which factors merely contribute to it. Second, I outline the major (diachronic) differences between counterfactual mood attraction in Archaic and Classical Greek (cf. Wakker 1994,

205-214). Third, I evaluate the still unidentified position of these instances of counterfactual attraction in the diachronic typology of counterfactual constructions in Ancient Greek, as it is undetermined when and why counterfactual constructions acquire attracted clauses. In fact, the evidence from Ancient Greek counterfactual mood attraction provides a welcome test-bench for existing diachronic typologies of counterfactuals in general, since existing typologies that are based on cross-linguistic data are (probably due to the complexity of typological comparison) limited to either main (see Van Linden and Verstraete 2008) or subordinate clauses (see Karawani 2014). As such, these typologies gloss over counterfactuals which transfer their counterfactuality to their subordinate clause (cf. Wakker 1994, 150-154).

The expected results of these analyses are that (1) counterfactual mood attraction occurs with more clause types than has previously been acknowledged, (2) the replacement of the counterfactual optative by various other counterfactual alternatives affects counterfactual mood attraction, (3) counterfactual mood attraction is especially determined by the 'logical-semantic' relationship between the matrix and subordinate clause, and (4) a revision is in order of the life-cycle of counterfactual clauses (cf. Yong 2018) which incorporates the syntactic scope of the counterfactual marker.

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## Expressing modality via parenthetical accord clauses in ancient Greek

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Keywords: accord clauses, parentheticals, evidential modality, scope effects, word order.

The paper presents an investigation on constructions where some syndetic parenthetical clauses are used to express modality values. The specific clauses examined in this study are exemplified by the following:

ὡς	(τὸ)	εἰκός
<i>hos</i>	<i>to</i>	<i>eikós</i>
as	the NOM.SG.N.	likely:NOM.SG.N.
	‘as (is) likely’	

An alternative construction introduced by ὥσπερ (*hóspēr*, ‘as’) is also investigated.

Although they originally functioned as a subordinate comparative accord clauses, they can express modality notions of evidentiality (inference and assumption: ‘as is likely’), epistemic judgement (casting doubts on the accuracy of a statement: ‘probably’, ‘likely’) and speaker’s commitment to the proposition (Cornillie 2007; Aikhenvald 2003). Besides the necessary identification of the modalities expressed, three research questions are addressed that focus on syntactic aspects of the construction.

The first question points to the syntactic status of the construction, whether it is a true parenthetical utterance or it behaves more like a comment clause, a discourse operator, a peripheral complement or a subordinate clause (Fuentes 2014). This question is addressed via a corpus analysis focusing on two parameters: scope (narrow/wide) of the clause and position relative to its anchor (precedency/adjacency). The corpus is formed by three classical prose authors: Thucydides, Xenophon and Plato. In a first approach, the construction shows a strong tendency to appear right after a narrow anchor and in a second position when it affects the entire host sentence.

A second question related to the corpus analysis deals with the cartographic configuration of the modality expressed by the relevant constructions, that is, the levels of syntactic structure at which they arise (Arregui et al. 2017). Epistemic and evidential modal meanings are often associated with high modality markers expressed by elements located in the left periphery. The corpus study intends to explore the potential of the construction for expressing low modality, with narrower scope and embedded in the verbal and nominal domains. One precise question is whether the constructions dealt with in this paper can appear as NP-modifiers, rather than as sentential adjuncts (Frana 2017).

The third question points to whether the different modal notions expressed originate via random development from the relatively wide range of meanings lexically conveyed by the root εἰκ-, or they are related as well to the syntactic construction employed. The question is addressed by confronting the following constructions based on the root εἰκ- (*eik-*), besides the aforementioned subordinate clause construction (Westlake 1958), namely, verbal or nominal main predicate:

εἰκός	(ἐστί)	+ infinitive clause
<i>eikós</i>	<i>estí</i>	
likely:NOM.SG.N.	be-1SG.ACT	
	‘it is likely’	

Adverbially-used NP or prepositional phrase:

κατὰ	τὸ	εἰκός
<i>katá</i>	<i>to</i>	<i>eikós</i>
according to	the:ACC.SG.N	likely:ACC.SG.N.
	‘probably’	

Adverb:

εἰκότως
<i>eikótos</i>
likely:ADV
‘likely’

A first approach to the corpus shows that the comparative parenthetical clause is more likely to express inference and probability only, while other constructions can express other modal values in different contexts. The prepositional phrase construction is frequently used to express expectation. And the adjective (+ copula) + infinitive construction can also express dynamic and deontic modality nuances.

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## **Evidentiality and complementation in Ancient Greek: The inferential gradient in the synchronic distribution of complementation strategies**

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Keywords: Ancient Greek, complementation, evidentiality, inference, common ground

One approach in the long-standing debate on the principles governing the distribution of the Ancient Greek complementizers seeks to apply the framework of evidentiality. Neuberger-Donath (1982) intimates that subordinate clauses in Herodotus after verbs of perception, knowledge, and utterance introduced by *hóti* convey propositions whose truth value is supported by external evidence. On the other hand, clauses introduced by *hōs* point to the subject of the governing verb as the source of the information (cf. Van Rooy 2016).

Verbs of perception and knowledge display a similar pattern of complementation in AG. The former take accusative with participle (AccPtc) signifying immediate perception of states of affairs, while *hóti* and *hōs* signal acquisition of knowledge, or inference (cf. Cristofaro 2008: 581). This is



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Mood in clause combination: formal and pragmatic features

Antonio R. Revuelta Puigdollers  
<not updated>

### Conditional subordinate clauses and verbal moods: a case study

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Keywords: moods, modality, sentence types, discourse functions, pragmatic functions.

In ancient Greek, conditional subordinate sentences with wish verbs ἐθέλω (ethélo:) and βούλομαι (boulomai) have different pragmatic and discourse functions. As in other languages (Kaltenböck 2016, Unceta 2009, *pace* Dickey 2019), they convey polite orders (Denizot 2011) as in (1):

- 1) ὅθεν δὴ μοι δοκοῦσιν αὐτὸ “ψυχὴν” καλέσαι. εἰ δὲ βούλει—ἔχε ἡρέμα· δοκῶ γάρ μοι τι καθορᾶν πιθανώτερον (Pl. *Cra* 400 a)
- |           |               |               |              |                     |             |          |
|-----------|---------------|---------------|--------------|---------------------|-------------|----------|
| hothen    | dé:           | moi           | dokou̓sin    | αὐτό                | psyché:n    | kalésai  |
| therefore | PTCL          | I-DAT         | seem-3pl-Pr  | it-ACC              | soul-ACC    | call-INF |
| ei        | dè            | bou̓lei       | —éche        | e:réma;             | dokô:       | gár      |
| if        | PTCL          | please-2sg-Pr | keep-2sg-IMP | still-ACC           | seem-1sg-PR | PTCL     |
| moi       | ti            |               | kathorâ:n    | pithanó:teron       |             |          |
| I-DAT     | something-ACC |               | see-INF      | more convincent-ACC |             |          |

[Therefore I think, they called it soul. But—if you please, keep still a moment. I fancy I see something which will carry more conviction]

Or they can introduce a reformulation of an expression (Verano Liaño 2015), or a new example as in (2):

- (2) εἰ δὲ βούλει, Περικλέα, οὕτως μεγαλοπρεπῶς σοφὸν ἄνδρα, οἷσθ’ ὅτι δύο τέκνα ἔθρεψε, Πάραλον καὶ Ξάνθιππον; (Pl. *Mn.* 94 a-b)

ei	dè	bou̓lei	Perikléa	hoúto:s	megaloprepô:s
if	PTCL	please-2sg-PR	Pericles-ACC	ADV	splendidly-ADV
sophòn		ándra	oísthā		hoti
accomplished-ACC		man-ACC	know-2sg. PR		that
dúo:	tékna	étrepe	Páralos	καὶ	Xánthippon
two	sons-ACC	bring-3sg.AOR	Paralus-NOM	and	Xanthippus-NOM

[But if you please, the splendidly accomplished Pericles: he, as you are aware, brought up two sons, Paralus and Xanthippus]

The if-sentence can be built with an indicative mood (βούλει, boúlei) or with a subjunctive mood plus modal particle (ἐάν βούλη, eán boúle:i) conveying an epistemic modality content: probability.

My research questions are: whether verbal moods in the main clauses in each type -namely imperative, subjunctive and indicative- are compulsory to convey these contents or the directive contents (polite orders) can be expressed without imperative or subjunctive and the discourse contents (reformulative or exemplificative) can be conveyed without indicative moods. 2) Whether the subjunctive mood and indicative mood in the if-sentence keep their epistemic modality contents or the contrast between a realis mood and a probability mood is faded in this structure. 3) Whether the interaction between verbal moods and clause types (Siemund 2018) plays a role in the process. To these ends it is necessary to carry out a detailed analysis of the discourse functions (Ruiz Yamuza 2019), and formal properties of the conditionals (Wakker 1994). As a theoretical framework for the investigation, Construction Grammar (Croft 2001, Drummen 2013) seems most appropriate. First, it allows for the integration of discourse-functional elements, and its taxonomic network structure can help bring out the similarity with related constructions.

My corpus has been selected in order to test the evolution of the constructions -it goes from the 8th century BC (Homer) to the 4th century BC (Plato)- and to include an extensive variety of text types, particularly the text structures that have a high degree of interaction between speaker and addressee, as such as dialogues and monologues in comedy (Aristophanes), in tragedy (Sophocles and Euripides), and dialogues and speeches to present reactive audiences (in the works by Plato).

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## Modality, (Inter)subjectivity and Politeness in Addressee-Oriented Assertions in the Dialogues of Plato

Rodrigo Verano

Assertions (Stalnaker 1978) are complex phenomena in communication. When asserting something, speakers not only expose their own beliefs and ideas, but also design their statements with a view to

their addressees, thus unveiling their assumptions and thoughts about them. Particularly, addressee-oriented assertions—those referring to the interlocutor—have to be treated carefully in verbal interaction, since they raise issues related to common ground management (Clark & Brennan 1991; Allan & van Gils 2015) and can be easily perceived as face-threatening acts in terms of Politeness Theory (Brown & Levinson 1987; Culpeper & Kádár 2010).

This paper examines such assertions in a corpus of three dialogues of Plato (*Euthyphro*, *Laches*, *Lysis*), in order to describe which communicative strategies are used to prevent such face-threatening interpretations in classical Greek. After analysing the corpus, two major patterns emerge:

A) Cancelling the truth-conditional value of the uttered assertion by turning it into a question, as in (1):

(1) Euthph. 7e-8a: {ΣΩ.} Ταὐτὰ δέ γε, **ὥς σὺ φής**, οἱ μὲν δίκαια ἡγοῦνται, οἱ δὲ ἄδिका, περὶ ἃ καὶ ἀμφισβητοῦντες στασιάζουσι τε καὶ πολεμοῦσιν ἀλλήλοισι· **ἄρα οὐχ οὔτω;**

Tautà dé ge, ho:s su phé:is, hoi mèn díkaia he:goúntai, hoi dè ádika, perì hà kaì amfisbe:toúntes stasiázousí te kaì polemoúsin allé:lois · âra oukh hoúto: ?

*But **you say** that the same things are considered right by some of them and wrong by others ; and it is because they disagree about these things that they quarrel and wage war with each other. **Is not this what you said?***

Thus, the speaker invites the addressee to agree and ultimately gives him/her the last word, mitigating a possible face-threatening act by means of an intersubjectification strategy (Traugott 2010).

B) Softening the proposition through the use of epistemic modality markers (Ruiz Yamuza 2013). As a result, assertions become subjectivized and appear less threatening to the addressee's face. Those markers include modality adverbs, such as ἴσως ('perhaps') in (2), parenthetical expressions such as ὡς ἐγὼ μαι ('in my opinion'), or syntactic constructions with the verbs δοκέω and φαίνομαι ('it seems'), as in (3):

(2) Lach. 189e: **ἴσως** οὖν οὐ μανθάνετε μου ὅτι λέγω, ἀλλ' ὥδε ῥᾶον μαθήσεσθε.

íso:s oûn ou mantháneté mou hótí légw, all' hō:de rhâion mathé:sete.

***Perhaps** you don't understand what I mean, and you'll learn more easily this way.*

(3) Lach. 187e: {ΝΙ.} **Οὐ μοι δοκεῖς** εἰδέναι ὅτι ὅς ἂν ἐγγύτατα Σωκράτους ἦ [λόγω ὡσπερ γένει] καὶ πλησιάζῃ διαλεγόμενος, ἀνάγκη αὐτῷ, [...].

Oú moi dokeís eidénai hótí hós àn eggútata So:krátous ê:i [lógo:i hó:sper génei] kaì ple:siáze:i dialegómenos, anágke autó:i, [...]

*Nic. **I don't think** you realize that whoever is nearest Socrates and joins him in conversation, even if the conversation perhaps begins with something else, is necessarily drawn [...].*

The proposed analysis, based on a corpus pragmatically designed, will show an overview of the formal strategies and their distribution, and will contribute to a better understanding of the shades and

nuances associated to different intersubjectivity and modality markers that share a specific purpose in ancient Greek discourse.

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## WORKSHOP 4

### Causation: from concept(s) to grammar

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Keywords: causation, conceptual structure, event structure, interface with grammar

This workshop aims at investigating the ties between the cognitive representation of causation and its linguistic realisations, in order to define how the primitives of causation interact with grammar at different levels of representation.

A growing body of formal and cognitive studies on causation in natural language has been recently showing that causative predicates encode a complex inventory of relations (Wolff (2007)), and cannot be adequately represented with a single, abstract CAUSE operator (as in e.g. Dowty 1979). Among the formal models focusing on the different types of causal dependencies, force dynamic theories (Talmy 2000, Wolff & Thorstad 2016) decompose causation into a set of primitives (HELP, PREVENT, CAUSE) that reflect the interactions of causers' forces and tendencies. Thus, the English causative verb *make* (1) is described as encoding a relation where the Causer's (John) and Causee's (the children) tendencies have diverging directions (Wolff & Song 2003), whereas *let* describes a relation where their tendencies correspond (2).

- (1) John made the children eat the soup.
- (2) John let the children eat the soup.

While we have made progress in understanding the fine-grained structure of causation at the conceptual level, the lexical and grammatical realisations of conceptual primitives need further investigation. Looking both at cross-linguistical data and within languages, there is no one-to-one mapping between a causal primitive and a causative predicate, and some causative predicates can yield interpretations that are not (yet) entirely covered by the primitive relations theorised by force dynamics. Pitteroff (2014) argues that German *lassen* falls under both *causing* and *letting* (Lauer & Nadathur 2018), and recognises an additional, *non-interference* reading. While *causing* and *letting-lassen* don't display morphosyntactic differences, only *non-interference-lassen* can be passivised (3a vs. 3b, Pitteroff 2014: 58). Similarly, French *laisser* 'let' enters two syntactic configurations (4a-b) (Kayne 1975) associated with the two subtly distinct interpretations of *non-interference* and *autorisation* (Enghels 2009).

- (3) a. \*Die Kinder wurden (von der Mutter) ein Eis essen lassen / gelassen.  
the children became by the mother an ice eat let.INF / let.PRT  
'The children were allowed to eat an ice cream by the mother.'
- b. Das Bild wurde (von dem Maler) hangen \*lassen/ gelassen.  
the picture became by the painter hang let.INF / let.PRT  
'The picture was left hanging by the painter.'

- (4) a. Jean laisse jouer les enfants.  
John LET play the children
- b. Jean laisse les enfants jouer.  
John LET the children play  
'John let the children play'

In a model where syntax and semantics inform each other, one may thus ask to what extent the selectional properties of the causative head depend on the causal relation it encodes and how much of this information is seen by grammar. The division of labour between lexical and functional heads is debated in the case of lexical causatives (Alexiadou et al. 2006, Copley & Harley, 2020; Beavers & Koontz-Garboden 2020), and this issue is all the more relevant in the case of causative predicates that, like *make* (1), may enter configurations of growing complexity.

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## The building blocks of causation: evidence from non-canonical realization

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**Keywords:** causation, L1 acquisition, L2 learners, heritage languages, compression

As has been pointed out in the literature, in early stages of L1 acquisition (Bowerman 1982, Marcotte 2005, Bezinska et al. 2008) children resort to non-canonical expression of lexical causative and anticausative verbs. L2 learners and Heritage Speakers (HSs) behave similarly (e.g. Juffs 1996, Montrul 2001, Zyzik 2014). Such patterns may involve a light verb combined with an infinitival form for causatives, (1), and (*get*) passives, (2) and (3), for anticausatives. (1-3) are seen as errors or in the case of L2 as transfer patterns, perhaps correlating with proficiency (Cabrera 2019), which eventually learners (should) eliminate from their grammar.

- (1) *El abogado hizo temblar a Gabriel.*  
'The lawyer made Gabriel tremble.' (Zyzik 2014: 21; Spanish HS)
- (2) a. My mother was died when I was just a baby. (Zobl 1989: 204, Thai L2 learner of English)  
b. then he will be *died* (Bowerman 1974, 1982, L1 English)
- (3) The window got broken (*instead of broke*) (Montrul 2001: 181, Spanish L2 learner of English)

In this talk, I will revisit such patterns. In view of the fact that such non-canonical realizations are also possible for L1 adult speakers (Marcotte 2005), I conclude that (1-3) cannot be viewed as errors/transfer patterns. Building on Sauerland & Alexiadou (2020), I will argue that this type of non-canonical realizations actually informs our theories of the building blocks of (anti-)causatives: (1-3) show that speakers may morphologically realize the (anti-)causative primitives which the canonical adult grammar may compress.

I adopt the decomposition of lexical causatives in Alexiadou, Anagnostopoulou & Schäfer (2015), according to which causatives and anticausatives minimally contain the layers in (4): they both contain a causative component, composed of an eventive *v* layer in combination with a ResultP, Ramchand (2008); the two structures differ in that (4a) includes an external argument bringing about the event. I further assume that light verbs e.g. *make* and *get* realize *v*, Embick (2004), Alexiadou (2012).

- (4) a. [TP Past [VoiceP External argument [vP [ResultP  $\sqrt{\text{BREAK}}$  ]]]] causative  
*John broke the window*
- b. [TP Past [vP [ResultP  $\sqrt{\text{BREAK}}$ ]]] anticausative  
*The window broke*

In e.g. English, in (4a-b) the exponence of the functional layers is compressed. *Compression* may arise via fusion of heads, where *broke* realizes the complex T-Voice-*v* head, Halle & Marantz (1993). Fusion reduces the number of independent morphemes, see Siddiqi's 2006 Principle of *Minimize Exponence*, cf. nano-syntactic analyses in Ramchand 2008, Svenonius 2016. This implies that overt material comes with some cost, which explains the marked nature of periphrasis for L1 adult speakers (Marcotte 2005). However, this process creates morphological complex structures with singular

exponence, lacking a one to one meaning-form correspondence. Multilingual speakers and L1 learners avoid such complexity by failing to compress and produce overt realizations for the heads in (4). This explains the difficulties (L2) learners have with English zero morphology: as observed in Montrul (2001: 186), it is easier for learners whose language has zero-morphology to acquire overt morphology than the other way around.

## **Speakers' preference for more versus less-transparent causatives: Computational modeling, grammaticality judgment and production data from English, Hebrew, Hindi, Japanese and K'iche'**

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Keywords: Causatives, verbs, argument structure, periphrastic, transitive.

Many of the world's languages (Shibatani & Pardeshi, 2002, discuss 38 examples) have (at least) two causative structures, which particular verbs prefer to a greater or lesser degree: (1) a *more-transparent* structure with the verb *cause/make/do* or a morpheme that is often a historically grammaticalized form of that verb (e.g., Japanese *-(s)ase*), and (2) a *less-transparent* structure that marks causation more idiosyncratically (e.g., by using a form that is either indistinguishable from a non-causative or stem form, or similar to such a form, but with a vowel or consonant change that is only partially predictable):

- (1) Someone made the truck break
- (2) Someone broke the truck

In the present study, 20 native speakers of each language rated each of 60 actions for four causative-relevant semantic properties:

**Event-merge:** The extent to which the causing and caused event are two separate events or merge into a single event that happens at a single time and a single point in space

**Autonomy** of the causee

**Requires:** Whether the caused event requires a causer

**Directive:** Whether causation is directive (e.g., giving an order) or physical

These ratings, together with corpus frequency information, were to build a computational model of speakers' causative preferences for each language. For every language except K'iche', this model significantly predicted speakers' preference for the more- versus less-direct causative form across 60 verbs, as assessed using continuous grammaticality judgments (adults, children aged 5-6 and 9-10), binary grammaticality judgments (4-5) and elicited production (4-5 and 5-6). We conclude that the morphosyntactic realization of causativity is determined primarily by the degree of conceptual merging between the causing and caused event (Shibatani & Pardeshi, 2002).

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## Speakers’ preferences for the conceptualisation and encoding of causative constructions in Spanish

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**Keywords:** causality, Spanish, linguistic encoding, conceptualisation, intentionality.

The grammar of causation, as part of the grammar of situation representation, and along with the representation of space and time, is part of the core of the syntax-semantics interface in every human language (Croft 1991; Dowty 1991; Jackendoff 1990; Parsons 1990; Talmy 1983; Van Valin & Wilkins 1996). Previous work on Spanish caused-motion events (Filipović 2013; Ibarretxe-Antuñano 2012; Ibarretxe-Antuñano *et al.* 2016) has shown that Spanish speakers encode and categorise these events on the basis of two main components: the degree of intentionality and force-dynamics. In a recent psycholinguistic study, Ariño-Bizarro and Ibarretxe-Antuñano (2020) found that these two components, especially intentionality, do play a crucial role in the categorization of causative events. Spanish speakers attribute different degrees of responsibility depending on the intentional and non-intentional character of the event performed.

Stemming from Ariño-Bizarro and Ibarretxe-Antuñano (2020), this paper explores the relationship between the conceptualisation of causation and its encoding. The goal is twofold: to test the congruency between Spanish speakers’ intentionality ratings and their form-to-meaning mappings for the same causal event, and to reveal possible lexicalisation preferences for each causal event.

Data were collected using the CAL videoclip stimuli (CAL, SunyBuffalo), a set of 58 live causal action videos of interactions among humans, natural forces and inanimate objects. The study was divided in two tasks: (i) a verbal description task, where participants watched the visual stimuli and responded to the question “what happened?”, and (ii) a judgment task, where participants had to range up to 12 causative construction types per clip after watching it on the basis of the semantic accuracy, pragmatic felicity, and grammaticality of the construction. In total, 52 native European Spanish speakers participated in this study: 32 participants in Task 1 and 26 participants in Task 2.

Results show that Spanish speakers’ linguistic descriptions are significantly congruent with their intentionality ratings (e.g. reflex passive constructions (*el vaso se ha caído* ‘lit. the glass clitic.3sg.dat has fallen’) are consistently used for non-intentional causal events). Results also reveal that the choice of specific constructions for these events is not random: Spanish speakers prioritise informativeness over directivity. That is, they prefer anaphoric constructions, which are more structurally complex but more informative, rather than periphrastic causative structures, which are more iconic and therefore, more direct. These results cast doubt over the general idea that if there are two possible constructions,

one structurally-simple and one structurally-complex, speakers would prefer the simple option (Bohnenmeyer *et al.* 2010; Dixon 2000).

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## Causes and Conditions

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<not updated>

## Intentions and dispositions

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Keywords: syntax-semantics interface, causation, modality, state, event

A grammatical form involving a verb is often felicitous with either an animate or an inanimate entity as its subject. Animate entities participate as an intentional “agent” or “director” (Ritter and Rosen 1993,) or as an unintentional “causer”. Inanimate entities obviously cannot have intentions, but can participate as a “causer”. Often, there is a pattern of *idiosyncratic inanimate exceptions*, where the form generally admits animate subjects, but only admits a few kinds of inanimate subjects, sometimes with a restricted class of event types. Such a pattern has been discussed in the literature for Vendlerian accomplishments (Folli & Harley 2005, 2008), nominalizations (Sichel 2010; Alexiadou et al. 2013), futurates (Copley 2018), and *have* causatives (Copley 2018), among others.

- |     |  |                     |
|-----|--|---------------------|
| (1) | The sea ate the beach *(away).   | Folli & Harley 2005 |
| (2) | a. #The book had John laugh.<br>b. The book had John laughing/on the floor/in tears. | Copley 2018         |

What explains this widespread pattern? I propose, very much in the spirit of Folli & Harley 2008, that it arises from **differences in the properties** (states) of animate and inanimate entities. Any property can have a causal role, but certain properties—intentions and dispositions—can be distinguished as specifically being causal in nature. They are often represented in both linguistic and philosophical approaches as follows: A holder ( $x$ ) holds a state ( $s$ ) that is “directed toward” a description ( $p$ ) of an eventuality; and under certain circumstances, if nothing interferes, then by virtue of  $s$ ’s being so directed,  $s$  leads causally to an eventuality ( $e$ ) such that  $p(e)$ . This is how intentions and dispositions are similar. They differ in that intentions can cause a wider range of events, in a wider range of circumstances, than dispositions can. Thus, animate entities, which can cause eventualities by virtue of their intentions, are expected to be able to cause more kinds of events in a wider range of circumstances than inanimate entities, which cannot have intentions. So, in a linguistic form that (suppose) requires the subject to hold a causal power toward the eventuality description, if the entity cannot have such a causal power, the sentence is infelicitous. This account attributes the pattern of felicity in our idiosyncratic inanimate exception forms to a question of *what can cause what*. While *what can cause what* may sound conceptual, not grammatical, in nature, some of that information is apparently visible to the grammar, notably the difference between events and states; e.g. the dispositions of the sea and the book in (1) and (2) are unable to cause events as such and must instead cause states, represented by small clauses.

I further argue that this view of intentions and dispositions gives us a context in which to understand the existence of Squamish out of control forms (Jacobs 2007), involuntary state constructions in e.g. South Slavic languages (e.g., Rivero 2009), and Tagalog ability/involuntary action verb forms (e.g. Alonso-Ovalle & Hsieh 2017): All involve a causing intention or disposition that may be either intrinsic or extrinsic to the subject.

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## **The causative constructional network in Spanish: A stringent case of language productivity at work.**

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Keywords: causation, construction grammar, productivity, near-synonymy, prototypicality

Most investigations on causation focus on patterns including the verbs *to make* and *to let*, which serve as models for general formal and semantic accounts of the causative construction, and very little attention has been paid to causation expressed by other lexical verb categories (e.g. Comrie 1976, Davies 1995). This study wants to fill this gap by elaborating the constructional network of causative constructions in Spanish, which can be considered as clear example of how language productivity (as defined for instance by Barðdal 2008) interrelates with the conceptual structure of causation. In concrete, the analysis pursues a triple goal.

First, based on a careful consideration of data found in the Spanish corpus of the TenTen family on Sketchengine, the set of (semi) auxiliary verbs appearing in the causative construction is established. At least 18 different verbs are attested, underlying the high degree of productivity of the construction in Spanish. These verbs cluster into different semantic groups: (1) superlexical verbs of causation (*hacer* ‘to make’, *dejar* ‘to let’, *mandar* ‘to order’, *forzar* ‘to force’), (2) inchoative verbs (*comenzar*, *iniciar*, *arrancar* – ‘to start’), (3) break verbs (*reventar* ‘to burst’, *romper* ‘to break’), (4) throw verbs (*echar*, *tirar*, *lanzar* – ‘to throw, to launch’), (5) movement verbs (*saltar* ‘to jump’), (6) other change of state verbs (*liar* ‘to bind’, *soltar* ‘to untie’), and (7) put verbs (*poner*, *meter* – ‘to put’). These verbs can be considered as near-synonyms expressing, however, different perspectives of causation.

The second part of this presentation will focus on causation as originated by put verbs (category 7 above). It is investigated whether the fact that they originate from a different lexical-semantic category has an impact on the formal characteristics of the causation constructions they form.



the police, on mandate of four public prosecutor, seized  
 ‘the police, on the mandate of four public prosecutors, seized’

While *per mano di* in (1) introduces the PERFORMER of the action (i.e. the participant who intentionally performs the action, being at the same time its originator and instigator), the CP *su suggerimento di* (2) introduces a CONCEIVER (i.e. the participant who conceives the action, but does not perform it and has no control over its development nor over someone else performing it), while the CP *su mandato di* (3) introduces the INSTIGATOR (i.e. the participant who conceives and plans an action, and has a coercive power on the actual performer).

The distinction between INSTIGATOR and CONCEIVER in terms of the presence of the trait <± coercive power> recalls the dichotomy *between direct and indirect causation* (Comrie, 1981, 1989). As causative constructions, Italian CPs are able to:

- (a) assign a new agentive slot to the verbal unit (Lehmann 1996),
- (b) give rise to the distinction between two agentive participants in a sentence, sharing the involvement in the action, but being characterized by different agentive features.

Furthermore, there is a peculiar hierarchical relation between the Causers (*scale of causative force*, cf. Comrie 1981, Simone and Cerbasi 2000): for example, the CONCEIVER and the INSTIGATOR promote the acting of the PERFORMER, who materially performs the action.

This work aims at correlating the Italian CPs to the different types of causativity that can be represented in the causativity scale. Using data collected from an Italian corpus of web texts (ITTenTen16), this work aims at i) identifying different types of Italian CP denoting Causers, ii) distinguishing them according to the degree of causative force, and iii) comparing Italian structures to similar configurations of other Romance languages (i.e. Spanish and French).

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Force calculation is cyclic

Jens Hopperdietzel, Malte Zimmermann & Mary Amaechi  
 <not updated>

## A Causal Approach to Perfectivity

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**Keywords:** causation, verbal aspect, Russian linguistics, perfectivity, specificity

It is well-known that perfective predicates in Russian denote sets of bounded/temporally delimited events (e.g. Forsyth 1970, Krifka 1992, Zaliznyak & Shmelev 2000, Filip 2008, Timberlake 2004). However, in addition, perfectivity is accompanied by what can be intuitively called **event specificity/temporal definiteness** (Dickey 2000). To illustrate, while the imperfective *Dima ne zvonil* ‘Dima didn’t call’ constitutes a relatively neutral statement, its perfective version *Dima ne pozvonil* can only be uttered when a specific event is denied, e.g. calling at a particular time or regarding a particular issue. The specificity view is supported by the fact that past perfective verbs strongly tend to be incompatible with such temporal adjuncts as *nikogda* ‘never’, *kogda-libo* ‘ever’ and *kogda-nibud* ‘some time’, ‘any time’:

- (1) \*Dima nikogda ne vstretil Mašu.  
Dima never NEG met PERF Masha  
‘Dima has never met Masha.’

Moreover, under negation and in other downward-entailing environments, the use of the perfective informs the addressee that it was **reasonable** to expect the event in question. To illustrate, if the speaker is accused of Ivan’s murder, the imperfective *Ja ne ubival Ivana* ‘I didn’t kill Ivan’ is appropriate, unlike the perfective *Ja ne ubil Ivana*. The latter suggests that the speaker planned or even just considered the murder, etc. Crucially, the “feasibility” should not be equated with a requirement that the event in question began to take place. *Ivan ne napisal pis'mo* ‘Ivan didn’t write a/the letter’, with a perfective verb, can be uttered if Ivan did not even start writing, as long as there have been reasons to expect that he would.

**Proposal:** We use a causal model approach (Baglini & Bar-Asher Siegal 2019, Nadathur & Filip 2021, Copley to appear) where multiple causal conditions—either intentions or circumstances—can influence an eventuality. Causal influences exhibit *defeasible efficacy* (Copley & Harley 2020, and see Talmy 1988, e.g.), where their effect occurs *ceteris paribus*, but if another influence interferes, that effect may not occur. Influences can be “stimulatory” (+) or “inhibitive” (-).

- (2) Anna ne ubila Ivana.  
Anna NEG killed.PERF Ivan  
‘Anna didn’t kill Ivan.’

- (3) a. Causal model presupposed by (2)

for  $s < s' < s'' < s_{utterance}$

$\textcircled{X} \rightarrow^+ \textcircled{E} \rightarrow^+ \textcircled{R}$

$\textcircled{X}(s) = 1$  iff  $e$  is defeasibly efficacious for Anna-kill-Ivan (contributed by perfective)

$\textcircled{E}(s') = 1$  iff Anna-kill-Ivan( $s'$ ) (i.e.,  $s'$  is defeasibly efficacious for Ivan-dead)

$\textcircled{R}(s'') = 1$  iff Ivan-dead( $s''$ )

- b. Perfective presupposition:  $\exists s : \textcircled{\times}(s) = 1$   $\textcircled{\vee}$
- c. Assertion:  $\lambda s' . \sim[\textcircled{\oplus}(s') = 1 \ \& \ \textcircled{\oplus}(s') = 1]$   $\downarrow -$
- d. Minimal models in speaker's mind:  $\textcircled{\times} \rightarrow^+ \textcircled{\oplus} \rightarrow^+ \textcircled{\oplus}$  or  $\textcircled{\times} \rightarrow^+ \textcircled{\oplus} \rightarrow^+ \textcircled{\oplus}$   $\downarrow -$
- “event collider”    “result collider”

The “specificity” effect associated with perfective clauses is due to the presence of  $\textcircled{\times}$  in the presupposition:  $s'$  is caused by the specific intentional state or circumstance  $s$  that  $\textcircled{\times}$  is predicated of. The “feasibility” intuition for the negative is due to the projection of the defeasible efficacy presuppositions. We draw connections between our proposal and the maximality proposal of Filip (2008).

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## Causation in Bulgarian: evidence from 3- to 6-year-old monolingual children

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Keywords: causation, causative mechanisms, linguistic complexity, language acquisition, Bulgarian

Causation in natural language has been the subject of many classic studies in formal and cognitive grammar (Talmy 2000, Wolff & Song 2003, Wolff 2007). Surprisingly, the acquisition of this fundamental category of human cognition across languages has not been closely examined to date (Bowerman 1974, Ammon & Slobin 1979).



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## Causative constructions in Khinalug

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Keywords: Nakh-Dagestanian, Azerbaijan, Khinalug, Causative, Permissive

Khinalug is a Nakh-Dagestanian ergative language spoken by app. 2.300 people in Khinalug village in Northern Azerbaijan. Its verbal system reveals a development from labile verbs to a lexical transitivity / intransitivity distinction. All presented examples are fieldwork data collected by the author.

Khinalug can form three types of causative structures, using the auxiliary verbs *k<sup>h</sup>iri* ‘do’, *č<sup>h</sup>ek’iri* ‘sell’, and *yaχuri* ‘let’.

Intransitive verbs are transitivized, and transitive verbs are causativized by *k<sup>h</sup>iri* ‘do’. Notably, all verbs combine with *k<sup>h</sup>iri* in their intransitive or intransitivized imperative forms:

Transitivization:        *erp<sup>h</sup>iri* ‘melt’ > *erp<sup>h</sup>i-l-k<sup>h</sup>iri* ‘melt (sth.)’  
Causativization:        *gäč<sup>h</sup>širi* ‘to build’ > *gäč<sup>h</sup>i-l-k<sup>h</sup>iri* ‘make build’

The auxiliary verb *č<sup>h</sup>ek’iri* ‘sell’ combines only with transitive verbs, and forms their causative. Differently from *k<sup>h</sup>iri* ‘do’, *č<sup>h</sup>ek’iri* requires them to occur in their imperfective participle form (which is also their lemma form in dictionaries):

Causativization:        *gäč<sup>h</sup>širi* ‘build’ > *gäč<sup>h</sup>š-i-ri č<sup>h</sup>ek’iri* ‘make build’

The auxiliary verb *yaχuri* ‘let’ combines with both intransitive and transitive verbs, and forms their permissive. Like *č<sup>h</sup>ek’iri*, it requires these verbs to occur in their imperfective participle form (exceptions see below):

Intransitive permissive: *erp<sup>h</sup>iri* ‘melt’ > *erpi-ri yaχuri* ‘allow to melt, let melt’

Transitive permissive: *gäč<sup>h</sup>širi* ‘build’ > *gäč<sup>h</sup>širi-ri yaχuri* ‘allow to build, let build’

In combination with transitive verbs, *k<sup>h</sup>iri-* and *č<sup>h</sup>ek’iri-*constructions are considered synonymous by the speakers. Hence, the sentence (1)

- (1) *ustad-i c’oa gäč<sup>h</sup>iši-r-et<sup>h</sup>-mä*  
 master-ERG house build-IPFV-PTCP:COP-DECL  
 ‘The master-builder is building a house.’

can be causativized as in (2) or (3):

- (2) *namik<sup>h</sup>-i ustad-u c’oa gäč<sup>h</sup>š-i-l-k<sup>h</sup>i-r-et<sup>h</sup>-mä*  
 PN-ERG master-DAT house build-DETR-AUX:do-IPFV-PTCP:COP-DECL  
 ‘Namik is making the master-builder build a house.’

- (3) *namik<sup>h</sup>-i ustad-i c’oa*  
 PN-ERG master-ERG house  
*gäč<sup>h</sup>š-i-r-i č<sup>h</sup>ek’i-r-et<sup>h</sup>-mä*  
 build-IPFV-PTCP AUX:sell(IPFV)-IPFV-PTCP:COP:NEUTRAL-DECL  
 ‘Namik is making the master-builder build a house.’

The examples show a difference in the marking of the causee: dative with *k<sup>h</sup>iri*, ergative with *č<sup>h</sup>ek’iri*, the latter resulting in a double ergative construction.

Permissive constructions are formed with *yaχuri*. Its semantic scope includes ‘put’, ‘leave’, ‘let’, ‘let be’, and ‘allow’. Hence, the degree of activity of the agent varies considerably in these constructions. The Azerbaijani verb *qoymaq* has a similar semantic scope, and is used in permissive constructions as well: *et-mə-yə qoy-maq* do-VN-DAT AUX:put/let-INF ‘let do’.

In permissive *yaχuri*-constructions, the speakers vary between dative and absolutive at the causee. Dative (4) corresponds to the argument structure of *k<sup>h</sup>iri*, absolutive (5) mirrors the Azerbaijani permissive, where *qoymaq* governs a causee in accusative.

- (4) *laβun-ullu müslüm-i färhad-u niχeri-š ku-i*  
 yesterday-EL PN-ERG PN-DAT cattle-POSS.LOC go(IPFV)-PTCP  
*jaχ-r-ätt-i-šä*  
 CL1SG-AUX:let-IPFV-COP:NEUTRAL-NEG-PST  
 ‘Since yesterday, Muslim hasn’t allowed Farhad to herd (lit. go for) the cattle.’

- (5) *molla χanžan-i inad-qä žämäsät maččug-ur k<sup>h</sup>aku-i*  
 molla PN-ERG Friday community mosque-LAT come(IPFV)-PTCP  
*vaχ-r-att-i-šä*  
 CL1/2PL-AUX:let-IPFV-COP:NEUTRAL-NEG-PST  
 ‘Molla Khanjan didn’t let the community come to the mosque on Fridays.’

Some Khinalug speakers, who are most strongly influenced by Azerbaijani, replace the participle by a verbal noun + dative construction:

- (6) *hu vu si-k-r-i-s-u y-aχ-ur-d-i-mä*  
 he you CL2SG-take.as.wife-IPFV-VN-DAT CL1SG-AUX:let-IPFV-DP-NEG-DECL

‘[I] will not let him take you as a wife.’

Azerbaijani ‘make’-causatives are formed morphologically, and have no influence on Khinalug grammar.

## Enabling and causes

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**Keywords:** reason wh-questions, enabling, expectations, semantics, pragmatics

The questions in (1) have a reason reading, and are both used to inquire about what caused or enabled his sadness. The alternation ‘why/how’ is not uncommon (Collins 1991; Tsai 2008), but the reason reading of French *comment* (how) deserves more attention. We present a case for considering ‘enable’ the type of causal relation suitable for (1a), and discuss its peculiarity.

The term has a history. In philosophy and psychology, it is common to distinguish between causes and enabling conditions, e.g. respectively a malfunctioning component vs. gravity in an airplane crash (Cheng-Novick 1991). This has led to add normality, informativity or probabilities to logical accounts, because causes and enabling conditions are mostly taken to hold the same logical relationship to the effect in terms of necessity and sufficiency. In linguistics, ‘enable’ has been proposed e.g. for cases where one event is a necessary condition for the other, and ‘cause’ for events that are a sufficient condition (Reinhart 2002).

In all these proposals, the causal relation is viewed as relating events. This is not the case for reason-*comment* questions. The talk will develop the following points.

--These questions are used to inquire about propositions providing reasons for the possible truth of the prejacent *p*, i.e. the proposition expressed by the question radical. In the absence of a clear connexion between events, *comment* is fine but *pourquoi* (why) is not, see (2).

--They convey the speaker’s surprise at the situation described by *p*. No doxastic state other than the speaker’s is considered. E.g. a goal could be a reason in the eye of the initiator of the event, but *comment* is not compatible with continuations expressing goals although both questions in (3) admit a reason interpretation.

--They are easily interpreted as mention-some. Congruent answers provide possible reasons for *p*, not necessary ones. They have the ability to change the status of *p* from false to contingent, when added to the speaker’s expectations (Fleury-Tovenà 2018). They ‘enable’ *p* by adding at least one *p*-world to the worlds characterised by the expectations. Yet, they do not condition the actualization of the situation described by *p* in the world of evaluation.

(1) a. Comment il est triste? ‘How is he sad?’

b. Pourquoi il est triste? ‘Why is he sad?’

(2) <sup>[SEP]</sup>[Paul’s friends know he has to stop drinking, but he doesn’t. They talk about him.]

a. Q: Comment Paul continue à boire? A: Il continue bien à fumer.

b. Q: Pourquoi ... A: #Il ...

‘How/Why does Paul keep drinking? He keeps smoking too.’ (Fleury-Tovenà 2021)

(3) a. Q: Comment la police tolère-t-elle un tel désordre? A: #Pour éviter une confrontation inutile.

b. Q: Pourquoi ... A: Pour ...

‘How/Why do the police tolerate such a disorder? To avoid unnecessary confrontation.’

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<b>WORKSHOP 5</b>
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## **Cognitive Mechanisms driving (contact-induced) language change**

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Keywords: language contact; contact-induced change; historical linguistics; psycholinguistics; acquisition

The workshop focuses on contact-induced change on the level of syntax or at the interface of syntax with other levels (e.g. argument structure, aspect, word formation, information structure etc). This orientation comes from the research project “Borrowing of argument structure in contact situations” (BASICS, <http://tinyurl.com/dfgbasics>) where we have been investigating the extent to which Old French had an influence on the grammar of Middle English. In this workshop we would like to extend our focus to the cognitive factors relevant for language change and acquisition, such as, for example, frequency, structural priming, level of awareness, salience, analogy, ambiguity, chunking (see the contributions in Hundt et al. 2017). These factors originate from mental “capacities as memory, pattern recognition, abstraction, generalization, and routinization of repeated tasks” (Mithun 2003, 552).

Recent research has only started investigating how these mechanisms relate to historical language change. Frequency and especially the frequency of contextualized variants might allow inferences about language change in the past (Hilpert 2017, 67). Chunking entails changes in the analysability and compositionality of the given expression, and might therefore be intimately related to language change, especially in terms of grammaticalization (Bybee 2010; Bybee & Moder 2017). A low degree of salience of certain linguistic elements has been observed to favour morpho-syntactic change, whereas high salience has been judged implausible as a trigger (Traugott 2017, 102; 108). Also, it is not entirely clear whether (and how) the concept can be applied / adapted to historical periods (Traugott 2017, 96). Priming has been demonstrated to provoke ungrammatical utterances even in monolingual adults (Fernández et al. 2017). It seems highly plausible that repeated priming may have long term effects, especially via alignment and routinisation effects (Pickering & Garrod 2017, 175; 189). Analogy-induced phenomena (overgeneralizations), from an emergentist perspective, resemble the outcome of historical change (Behrens 2017, 235). In the same vein, structural ambiguity resulting from current variation can be taken as synchronic projection of language change, as the old and new interpretation of a given morpho-syntactic unit may coexist for some time in ‘critical contexts’ (Diewald 2002).

Although historical linguists have taken language acquisition to be the locus of change for some time, starting as early as 1880 with Hermann Paul, and have proposed models that make use of psycholinguistic explanations (e.g. Lightfoot 1979, Lightfoot 1999), a clear picture of the agent(s) of change and the cognitive mechanisms that may trigger or accelerate change is missing. Concerning the first issue, a number of scholars have assumed that the child is the innovator of change (Lightfoot 1979; Roberts & Roussou 2003; van Gelderen 2011), i.e. innovative analyses of the input on part of the child may become changes reflected in historical records (if they are retained and spread in the speech community). Others have claimed that it is adult speakers (e.g. Bybee & Slobin 1982; Kroch 2001; Traugott & Dasher 2002; Diessel 2012). In some cases, (successive) bilinguals are seen as the

agents of change (Meisel 2011; Meisel, Rinke, & Elsig 2013; Fernández et al. 2016), thus shifting the focus to the consequences change may have for acquisition. Concerning the role cognitive mechanisms may play in language change, quite a number of factors have been explored in the pertinent literature for some time, amongst others frequency, salience, analogy, and ambiguity, but only in very few cases has the role they play in psycholinguistic processes been recognised (cf. the contributions in the volume by Hundt et al. 2017).

Psycholinguists have only started to address the potential of cognitive mechanisms like, for example, priming, as a relevant factor in (contact-induced) change. The article by Jäger & Rosenbach (2008) seems to be the first work that explicitly discusses priming experiments and what their outcome may tell us about the unidirectionality of grammaticalization. More recently, a number of psycholinguists have started to address the importance of priming and syntactic adaptation for studies of (contact-induced) language change (e.g. Pickering & Garrod 2017; Kaan & Chun 2018; Kootstra & Muysken 2019) and some authors have tackled this issue in tandem from their different perspectives (e.g. Gries & Kootstra 2017), or even have the topic of acquisition and language change on their research agenda (Cournane 2014; 2017).

With this workshop we seek to encourage interaction between the two disciplines to gain new insights into the nature of (contact-induced) language change. Since we are aware that language change is not a primary question in psycholinguistics (yet) we also welcome conceptual papers addressing e.g. long-term and historically potentially relevant measurable effects, and in more general terms, the compatibility and complementarity of data in both fields (e.g. Holler & Weskott 2018; Bader & Koukouloti 2018).

Concerning theoretical approaches, it is not clear which are best suited for establishing parallels with experimental findings. For instance, the view that speakers' grammars are set after a critical period during childhood is common from a Universal Grammar perspective (Lieven 2017, 321) and stands in contrast to the usage-based view that "grammar is learned through a continuous process of abstraction" (ibid., p. 322), meaning that "even adult grammars are not fixed and static but have the potential to change as experience changes" (Beckner et al. 2009, 7). The extent to which adult grammars have the potential to change has consequences for models of (historical) language change, as it may broaden the scope of who can be considered as agents of change, i.e. adult speakers who may undergo language change within their lifetime in addition to change from one generation of speakers to the next. Regardless of the exact locus of change, cognitive processes need to have effects on a population of speakers rather than on single individuals for language change to happen (Pickering & Garrod 2017, p. 173). Probing the prospect of cognitive processes affecting language use and language development via experimental means can pave the way to better explain the triggers for change in models that consider language change on a broader time scale, such as computational models or those that view language as a "punctuated equilibrium" (e.g. Dixon 1997, 76–85). In such models, cognitive processes commonly occurring in newly bilingual populations could therefore be one cause of such "punctuations", i.e. bouts of comparatively rapid change.

We invite papers addressing these and related questions (in addition to the linguistic focus on syntactic phenomena):

1. Which cognitive mechanisms play a significant role in contact-induced structural change?
2. How can cognitive mechanisms be evidenced in historical data?
3. At what level can historical and psycholinguistic evidence be mapped, or at least be related to each other?
4. Who is the agent of change (monolinguals, (late) bilinguals, imperfect learners etc.)?
5. Which experimental methods are used to identify cross-linguistic effects and how can they be implemented in studies of contact-induced change?
6. How can contact-induced change be theoretically modelled in terms of cognitive mechanisms?

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## **Restructuring in grammatical evidentiality in Turkish as a heritage language and implications for cognitive modulators of contact-induced change**

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Keywords: Evidentiality, psycholinguistics, multilingualism, heritage grammars, contact-induced language change

Evidentiality refers to the grammatical category that denotes how a speaker knows information source for his/her statement (see Aikhenvald, 2004; De Haan, 2005). In non-evidential languages, evidentiality is often encoded through lexical adverbs (i.e. seemingly, reportedly). Evidentiality in Turkish, by contrast, constitutes an obligatory category that distinguishes whether the speaker has access to direct firsthand information versus indirect non-firsthand information (see 1-2).

- |     |   |     |       |                  |
|-----|---|-----|-------|------------------|
| (1) | Didem                                   | bir | şarkı | söyle-di         |
|     | Didem                                   | one | song  | say-DIRECTEVID   |
|     | 'Didem sang a song' [witnessed]         |     |       |                  |
| (2) | Didem                                   | bir | şarkı | söyle-miş        |
|     | Didem                                   | one | song  | say-INDIRECTEVID |
|     | 'Didem sang a song' [reported/inferred] |     |       |                  |

The overarching aim of this paper is to recapitulate on recent data from evidentiality processing in Turkish heritage speakers in order to draw tenable implications for potential cognitive mechanism modulating contact-induced language change. Turkish spoken as a heritage language presents several documented structural changes (Backus, 2013). Past studies have shown that adult Turkish heritage language speakers have reduced sensitivity to evidentiality marking, as compared to Turkish speakers in Turkey, using eye-movement-monitoring experiments (Arslan et al., 2015), sentence comprehension (Arslan et al., 2017), elicited sentence production (Schmid & Karayayla, 2020), and naturalistic speech production tasks (Arslan & Bastiaanse, 2020; Karayayla, 2020). It seems that Turkish heritage language speakers tend to take the direct evidential form as a default option as they often produce direct evidentials in places where indirect evidentials might be more appropriate (Arslan & Bastiaanse, 2020). In this paper, data from the aforementioned studies will be reviewed to reflect upon potential reasons leading to restructuring of evidentiality system in Turkish as a heritage language. This review circles around three main questions:

- (i) How do Turkish heritage speakers have reduced evidential semantics?
- (ii) How far Turkish heritage speakers' language experience profiles (i.e., age of acquisition, language exposure, and input quality) can be held accountable for restructuring of the evidentiality system?
- (iii) Are Turkish heritage speakers constrained by cognitive resource limitations while processing evidentiality?

Based on the data from available studies, one can clearly arrive at the conclusion that information source meanings marked by the evidential forms have been bleached leading to reanalysis of the Turkish evidentiality system under heritage language conditions. A number of implications can be drawn at this point regarding cognitive mechanisms that bring about structural change in evidentiality marking. It should be noted however further research is needed to determine which precise cognitive mechanisms these are. One possibility is that language experience (i.e. variables including exposure, input, etc.) shapes cognitive/linguistic development influencing maintenance of evidentiality. Several accounts in psycholinguistics would in fact point to this direction. A second possible explanation, as proposed by Polinsky and Scontras (2020), is that maintaining a heritage language is cognitively costly, and hence, heritage speakers restructure ‘cognitively demanding’ structures. A number of pieces are missing from this picture, which will be discussed. A third possibility is that restructuring of evidentiality in heritage grammars may be explained by frequency and cross-linguistic prevalence (Saratsli, Bartell, & Papafragou, 2020), implying that the evidential option marking more cross-linguistically prevalent information source meaning is more likely to be maintained.

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A psycholinguistic approach to feature borrowability in historical contact scenarios

María Eugenia Arthuis Blanco

<not updated>

## Language contact and language change from a constructional perspective

Alexander Bergs

Keywords: Language contact, Construction Grammar, language change, language use

Construction Grammar (CxG) assumes that linguistic knowledge is not based on “items and rules” but rather on the knowledge of conventionalized form-meaning pairings (constructions) and their relationships in the mental construction. Usage-based CxG further assumes that constructions are not innate, but that they are acquired, learned, and changed dynamically in informationally rich contexts throughout a lifetime. Constructions may range from single, concrete items, such as words, to complex abstract structures such as the benefactive construction.

This conceptual paper is an attempt to describe and analyze the role of language contact in linguistic change from a constructional perspective. In such a framework, the “units of transfer” for speakers in contact (or, alternatively, bilingual speakers) must be constructions or their elements, i.e. form and/or meaning (cf. Hoffmann 2014; Coleman 2016). As CxG does not recognize any categorical distinction between what is traditionally called lexicon and syntax, but only distinguishes between simple versus complex and concrete versus abstract constructions, one hypothesis to explore is that borrowing (or contamination) in language contact works roughly the same as it would for lexical items or idioms (cf. Coleman 2016). It seems rather unlikely that speakers in contact will borrow (adopt) more abstract constructions without first borrowing some concrete realizations. Rather, it seems likely that constructions are transferred just like they are learned or acquired: through (salient) concrete exemplars, pivot constructions, and pattern recognition, which leads to more abstract patterns at a later stage (cf. Höder 2018; Percillier 2020).

While this paper is basically only conceptual in nature, the key ideas of a constructional approach to language contact will be described and tested on the basis of phenomena and case studies from Yiddish-English contact (Yinglish), contact between varieties of English (in Australian English), and Latin-English contact (in Middle and Early Modern English), among others.

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## On the role of contact in the emergence of two new argument structure constructions in present-day Afrikaans

Timothy Colleman

This paper discusses two emergent new argument structure constructions in present-day Afrikaans. The first pattern (1) mirrors the form and semantics of the English *into*-causative (see, e.g., Stefanowitsch & Gries 2003, Kim & Davies 2015). The second pattern (2) closely resembles an English DISPOSSESSION construction with *out of* that does not seem to have attracted much linguistic attention before.

- (1) a. [SUBJ V OBJ *in* NP[‘action’]/INF *in*] \* ‘to get s.o. to do something by V-ing’  
 b. [*Jy*] *manipuleer hom in kos-maak in.* (Internet example)  
 you manipulate him in food-prepare in  
 ‘You manipulate him into preparing food.’
- (2) a. [SUBJ V OBJ *uit* NP[‘possession’] (*uit*)] \* ‘to deprive s.o. of sth by V-ing’  
 b. *Saam verneuk ons die sielkundige uit ‘n hele paar rand.* (Leipzig corpus)  
 together cheat us DEF psychologist out INDEF whole pair rand  
 ‘Together, we cheat the psychologist out of a whole lot of rands.’

On the basis of a data set from the Taalkommissie and Leipzig corpora (representing formal standard Afrikaans) and the WatKykJy and NWU-Kommentaar corpora (representing highly informal written language), with additional examples culled from the Internet, I will illustrate the productivity of these patterns in different registers of present-day language, esp. in combination with verbs relating to TRICKERY or VERBAL PERSUASION. As for the genesis of these new schematic patterns, I will argue for a short-term diachronic scenario in which they emerged on the basis of generalization over lexical constructions such as (3), in which an English loan verb is used in a pattern copying the form and meaning of the English construction into Afrikaans, selecting the “best match” in Afrikaans for the lexically-fixed parts of the English structure. New schematic constructions were formed as these copied patterns were extended to native Afrikaans verbs with the right semantics – a type of change that is relatively similar to the scenario outlined for the English *to*-dative in Trips & Stein (2019) but that, I will argue, is rather hard to classify in terms of Traugott & Trousdale’s (2013) model of constructionalisation and constructional change. This constructional innovation in Afrikaans was facilitated by the rich expressive semantics of the English source patterns and by the existence of prior interlingual identification of the Afrikaans circumpositions *in ... in* and *uit ... uit* with English *into* and *out of*, respectively.

- (3) *Toe ek sien die masjien kroek my uit my geld uit...*  
 when I see DEF machine crook me out my money out  
 ‘When I saw the machine was crooking me out of my money.’

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Experimental acquisition evidence that children may drive modal verb incrementation

Ailís Cournane  
<not updated>

## **Bilingualism-induced Language Change: What Can Change, When and Why?**

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Keywords: bilingualism, Complex Adaptive System Principles (CASP), language change, Maximize Common Ground, universal consistency

Contact between languages has become increasingly recognized as a major source of historical change, as linguistic properties are transferred from one language to another (Weinreich 1953, Thomason 2001, Harris & Campbell 1995, Campbell 2004). We now have lots of case studies showing changes that have resulted from contact (Darqueness et al. (eds) 2019). And yet contact does not necessarily lead to such changes. I.e. many, in fact arguably most, properties that could potentially be transferred among two languages spoken at a given place and a given time are not actually transferred. This paper argues that historical and contact linguistics should now:

- (i) look more systematically at cases where contact has NOT led to change, instead of focussing almost exclusively on when it HAS happened;
- (ii) look more systematically at bilingualism rather than contact per se and incorporate recent sociolinguistic and psycholinguistic findings and theories that can properly contextualize the social and psycholinguistic particulars of the contact situations in question and help us understand when transfer and borrowing do occur and when they don't;
- (iii) look more systematically outside contact and bilingualism to consider how universal and general diachronic patterns further impact the changes and transfers that can be expected for given pairs of languages at given points in time.

Filipović & Hawkins (2019) and Filipović (2019) have provided an integrated bilingualism model, CASP (short for “complex adaptive system principles”) incorporating the typological, psychological and sociolinguistic factors that are at play in bilingualism. This model is built on general principles of communicative efficiency, as advocated in recent psycholinguistic models (Gibson et al. 2019). Its cornerstone is the efficiency principle of “Maximize Common Ground” between two languages in the bilingual mind. It is the exploitation or creation of this common ground that ultimately determines the transfer of properties from one language to the other, depending on external social circumstances and

on the psycholinguistic type of the bilingualism as defined within CASP. The present paper applies this model of bilingualism to language contact phenomena in order to better understand what will change and what will not. It also links the model to general linguistic laws and universals, and to prior theories of language acquisition (Jakobson 1968), interlanguages (Eckman 1984) and uniformitarianism in language history (Roberts 2017), all of which have proposed consistency between evolving linguistic systems and the universal laws that hold for languages currently. The model is also linked to general diachronic laws and patterns involving gradualness and ease of innovation. By combining bilingual-specific with synchronic and diachronic linguistic constraints in this way we can make predictions for when and whether changes will be made in the grammatical conventions of one or the other language of the bilingual. We then point to bilingual studies in the published literature (including our own), to contact phenomena around the globe, and to historical data that provide support for these predictions. The general ideas and data of this paper give some initial answers to the what, when and why questions raised by bilingualism-induced language change. (499 words)

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## **The implications of linguistic awareness for contact-induced change**

Nicole Hober

This project aims to contribute to a clearer understanding of bilinguals as agents of contact-induced change. Specifically, I explore linguistic awareness, its relation to bilingual experiences (operationalised as quality and quantity of exposure), and its implications for contact-induced change.

Some contact linguistic models include awareness in their explanations ('equivalence' [Heine & Kuteva 2005], 'interlingual identification' [Weinreich 1953], 'pivotal matching' [Matras & Sakel 2007]), but the cognitive basis is rarely addressed. Still, early psycholinguistic research has shown that higher levels of bilingualism correlate positively with higher levels of explicit metalinguistic awareness (cf. Bialystok 1999). And Matras (2012) suggests that some contact-induced changes result from more conscious choices than others, possibly pointing to varying effects of linguistic awareness.

To study the role of bilingual experience and linguistic awareness, I consider contact-induced changes in passive constructions in scenarios with English as a contact language. The following research questions are addressed:

(i) Which types of contact-induced changes occur in passive constructions? What is the direction of change? Can connections be established as to the type of contact-induced change and the type of bilingual experience?

(ii) How does bilingual experience influence conscious and unconscious linguistic awareness? Are the different contact-induced changes in passive constructions brought about by the different types of linguistic awareness and their varying effects?

To answer the first block of questions, a comparative analysis is carried out using data from online atlases, grammatical and sociohistorical descriptions as well as electronic text corpora. To classify the types of contact phenomena, I follow Van Coetsem's (1988, 2000) contact framework and adopt Matras and Sakel's (2007) distinction between matter and pattern transfer. Matter transfer is exemplified in (1) and (2). Bilingual speakers transferred the adversative passive auxiliary *kena* from the source language Malay to the recipient language Singaporean English.

- (1) Malay (Bao & Lee 1999: 2–3)
- |            |                    |                |               |                 |
|------------|--------------------|----------------|---------------|-----------------|
| <i>Ali</i> | <b><i>kena</i></b> | <i>tangkap</i> | ( <i>oleh</i> | <i>polis</i> ). |
| Ali        | AUX.PASS[<strike]  | catch          | (PREP         | police)         |
- 'Ali was caught (by the police).'
- (2) Singaporean English
- The thief **kena** caught (by the police).*

Pattern transfer is shown in (3) for Pennsylvania German. The old construction in (3a) is structurally identical to European German, while (3b) gives the novel construction influenced by English, e.g. a form of *be* instead of *become* functions as the passive auxiliary and the agent-phrase introducing preposition is locative *bei*, not genitive *vun*.

- (3) Pennsylvania German (Burridge 1992: 222)
- |    |           |                 |                     |                   |            |             |                     |
|----|-----------|-----------------|---------------------|-------------------|------------|-------------|---------------------|
| a. | <i>De</i> | <i>Schtrump</i> | <b><i>waert</i></b> | <u><i>vun</i></u> | <i>der</i> | <i>Maem</i> | <i>geschtoppt</i> . |
|    | DET       | stocking        | <b>become.3SG</b>   | <u>by</u>         | DET.DAT    | mother      | darn.PST.PTCP       |
- 'The stocking is darned by mother.'
- |    |           |                 |                  |                   |                   |            |               |
|----|-----------|-----------------|------------------|-------------------|-------------------|------------|---------------|
| b. | <i>De</i> | <i>Schtrump</i> | <b><i>is</i></b> | <i>geschtoppt</i> | <u><i>bei</i></u> | <i>der</i> | <i>Maem</i> . |
|    | DET       | stocking        | <b>be.3SG</b>    | darn.PST.PTCP     | <u>at</u>         | DET.DAT    | mother        |

Specifically, I hypothesise that the effects of the varying degrees of linguistic awareness inform the types of changes that we can observe in passive constructions. To test the hypothesis and thus answer the second block of research questions, psycholinguistic research is reviewed, and experimental means are resorted to. By combining the study of language structure, use, and cognition, the study aims to shed light on the implications of (bilingual) linguistic awareness for contact-induced change.

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## The rise of non-oppositional middle verbs: the case of Old French

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**Keywords:** middle voice, non-oppositional middles, reflexive, Old French, Late Latin

Middle voice systems (MVSs) typically include two macro-classes of verbs: oppositional and non-oppositional middles (Kemmer 1993; Zúñiga & Kittilä 2019). With oppositional verbs, middle marking alternates with non-middle marking to signal valency reduction, e.g. reflexive or anticausative. By contrast, non-oppositional middles are verbs that always require middle marking.

Diachronic studies on the middle have repeatedly pointed out how MVSs invariably come about because an originally oppositional marker expands to non-oppositional verbs (Kemmer 1993; Kaufmann 2007). While there is a general consensus regarding the OPPOSITIONAL > NON-OPPOSITIONAL cline, the exact dynamics of such a development are largely unexplored.

In this paper, we aim to fill this gap and take a closer look at the development of the Latin reflexive pronoun *se/sibi* into the middle marker *se* of French. In Latin, reflexive *se* predominantly had oppositional reflexive and anticausative functions (Cennamo et al. 2015), while the Modern French continuant is in fact a middle marker. How the shift to non-oppositional verbs took place remains in part a matter of speculation.

We would like to argue that “pleonastic” reflexive verbs are the starting point of this process. We take “pleonastic” as occurrences of reflexive marking redundantly added to intransitive verbs with no (or minor) semantic contribution. This use is already attested in Late Latin, e.g. (*se*) *ambulare*

‘walk’ (Cennamo 1999), and is amply documented in Old French (OF) (Darmesteter 1897; Hatcher 1942; Gamillscheg 1957; Nyrop 1979; Adams 2013 *inter alia*). Examples are (*se*) *gesir* ‘lie down’, (*s’*) *apareistre* ‘appear’, (*se*) *morir* ‘die’ (Anglade 1965).

Our first goal is to offer an exhaustive quantitative description of pleonastic reflexives in OF, based on the *Anglo-Norman Dictionary* and the *Base de Français Médiéval* (BFM). We individuate the (classes of) verbs that allow pleonastic reflexives and investigate whether and how reflexive marking varies over time within the OF period. We also compare our results with Modern French and show that while some verbs that allow pleonastic marking in OF ultimately become non-oppositional middles (*s’évanouir* ‘faint’) with other verbs the pleonastic construction falls out of use (*apparaître* ‘appear’). The second goal is to explain the observed distribution. While the extension of reflexive marking is undoubtedly analogical in nature, its driving causes are unclear. We carefully evaluate the role of functional motivations already proposed in the literature, e.g. degree of distinguishability of events (Kemmer 1993) and clines of unaccusativity (Cennamo 1999), but also take into account the impact of frequency of individual verbs. Finally, we also explore the possible contact-induced influence of Late Latin.

The findings of this work are of significant relevance for the more general diachronic typology of MVSs. As we show, the shift from OPPOSITIONAL > NON-OPPOSITIONAL middles in OF is not merely an instance of lexicalization (as per Brinton & Traugott 2005) of reflexive marking. Instead, our data point towards a more complex historical scenario, in which middle marking is first optionally extended to intransitive verbs, and several factors contribute to the ultimate entrenchment of middle marking as obligatory with certain verbs and not with others.

### Resources

BFM – *Base de Français Médiéval* [En Ligne]. Lyon: ENS de Lyon, Laboratoire IHRIM, 2019, <<http://txm.ish-lyon.cnrs.fr/bfm>>.

AND – *Anglo-Norman Dictionary* <<https://anglo-norman.net/>>

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Mechanisms triggering the use of bare nouns in a language without bare nouns

Aritz Irurtzun & Maia Duguine

<not updated>

## **Cross-linguistic structural priming as a potential mechanism of contact-induced language change**

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Keywords: bilingualism, structural priming, contact-induced language change, psycholinguistics

It is evident from many studies that bilingual language use is influenced by cross-language interactions, such as code-switching and syntactic transfer. Interestingly, as suggested by language contact studies, such forms of cross-language interaction in individual's language use may in the long term result in contact-induced language change at the level of the linguistic community in which these cross-language interactions take place (e.g., Muysken 2013). In this talk, I propose that this process from cross-language interactions to contact-induced language change may well be driven by the phenomenon of crosslinguistic structural priming. Cross-linguistic structural priming refers to the process in which language users' syntactic preferences in one language are influenced by recently heard or used sentences from another language with similar structures (e.g., Kidd, Tennant, & Nitschke 2015; Van Gompel & Arai 2018). Importantly, this process does not only have short-term effects but also longer-term effects (Kootstra & Doedens 2014). I will present a number of experimental studies, based on various types of bilinguals and multiple languages, in which this interplay between short-term and long-term priming is reflected, not only in sentence production but also in sentence comprehension. These results provide important insights into the potential role of cross-linguistic structural priming as a cognitive mechanism of contact-induced language change.

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Shared processing strategies as a mechanism for contact-induced change in flexible constituent order

Savithry Namboodiripad  
<pdf>

## Loan word accommodation biases in Dutch and Middle English: A question of processing cost?

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Keywords: loan word accommodation, English-Dutch contact situation, French-Middle English contact situation, processing cost, corpus research

Loan words accommodate to the grammar of their recipient language (Poplack, Sankoff & Miller 1988, Muysken 2000). However, more recent research shows that loans are subject to ACCOMMODATION BIASES (De Smet 2014, Shaw & De Smet 2020, Shaw 2020). For instance, English loan verbs entering Dutch (e.g. *refreshen*) can be inflected like native Dutch verbs, but those loans are disproportionately frequent in specific usage categories such as infinitives (e.g. *refresh-en*) and past participles (e.g. *ge-refresh-t*).

This paper addresses the question as to what causes such loan word accommodation biases. Our corpus-based results derive from a dataset of adjectives and verbs in two language-contact settings: English loans in present-day Dutch, and Anglo-French loans in Middle English. The attestations were drawn from the CGN (Nederlandse Taalunie 2004) and PPCME2 (Kroch & Taylor 2000) corpora.

We argue that, in some cases, accommodation biases arise because speakers resist adding (native) inflections onto loans, which is in accordance with the literature (e.g. Harris & Campbell 1995, Schultze-Berndt 2017), but has also been challenged (Wohlgemuth 2009). Our own data suggest that speakers avoid inflecting loans, but the statistical effect is weak (Shaw & De Smet 2020, Shaw 2020). English verbs in Dutch are slightly more frequent in uninflected forms (e.g. first person singular present), and English adjectives in Dutch tend not to be inflected when inflection is optional. However, no strong effects were found for Middle English. Moreover, in both Dutch and Middle English the forms in which loan verbs are most common (i.e. infinitives and past participles) are inflected.

Our data show instead that the major accommodation biases are not inflectional but syntactic: (i) loan verbs in both contact situations are more frequently used non-finitely than finitely, and (ii) speakers avoid loan adjectives in syntactic categories where inflection is likely. For example, loan adjectives are more frequent in predicative than attributive position. We observe that, in both syntactic contexts where loans are more prevalent (i.e. non-finite and predicative), the loan word is accompanied by a copula/auxiliary carrying the grammatical information (e.g. English loan in Dutch, non-finite: *hij heeft gerelaxed* ‘he has relaxed’; predicative: *hij is relaxed* ‘he is relaxed’). The use of a light verb (cf. Wohlgemuth’s (2009) light-verb strategy) points to a processing cost involved in the integration of material from different source languages into a recipient language (Matras 2009), as also seen in code-switching (Myers-Scotton & Jake 2014).

Additionally, our data suggest further effects reflecting the adaptive nature of borrowing. Thomason & Kaufman (1991) and Campbell (1998) claimed that the length and intensity of contact can influence the outcome of language-contact situations. We have found that the biases for the English-Dutch contact setting are consistently stronger than those for the French-Middle English setting (De Smet 2014, Shaw & De Smet 2020, Shaw 2020), and the intensity of contact in the former

is weaker than in the latter (cf. Finkenstaedt & Wolff 1973, Thomason & Kaufman 1991, Zenner 2013). This suggests that, in these contact situations, accommodation biases weaken as borrowing becomes more frequent.

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## The role of analytic vagueness in the loss of Old French directional particles

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Keywords: syntax, verb particles, prepositions, analytic vagueness, Old French

Old French had a system of directional verb particles that disappeared between the 14<sup>th</sup> and 16<sup>th</sup> centuries. The puzzle has always been *why*, given their phonological salience and robust frequency in the OF textual record. In fact, their distribution had been expanding due to contact with Middle English (c.f. Schauwecker 2019).

Troberg & Leung (2021) link the loss of particles to the loss of Path as a discrete syntactic category. They propose that directional particles merge as specifiers of a Direction projection, which dominates Path within an extended PP (Svenonius 2010). The basic problem for any account is that the particles should themselves be cues for PathP. Troberg & Leung recognize this, proposing that the particles were ambiguous between intransitive prepositions, dependent on PathP (1a), and transitive prepositions with a null argument (1b), still possible in Modern French (*dedans, dessus, dessous*, etc.). Nonetheless, the question of *why* speakers favoured a transitive analysis over an intransitive one remains. This question is the focus of the present paper.

Following recent discussion of the difference between ambiguity and vagueness/underspecification and its implications for language change (De Smet 2009; Denison 2017; Felser 2017), analytic vagueness should be seen as the driver of this particular change. The choice between transitive or intransitive *ens* below, for example, poses no obstacle to communication.

When the prepositional element occurs right adjacent to the verb, shown in (1), the parse would always be vague and thus does not provide an unambiguous cue for PathP. Nevertheless, a transitive parse (1b) could be favoured on left-to-right incremental processing grounds; a structural least-effort principle favours the simpler derivation in (1b) over the intransitive parse (1a), which requires Path-to-v movement as shown.

While the V-Part order is always vague and favours the transitive analysis in (1b), an order in which the particle precedes the verb is not. Only intransitive particles can be fronted; a word order such as *ens entre li bers* ‘in enters the baron’ is possible for directional particles but not for prepositions with null complements. An important cue for a discrete PathP – perhaps the only one – is thus the fronting of particles to a position in the left periphery of the clause. I argue, therefore, that the loss of Path as a discrete category and consequent loss of particles can be straightforwardly tied to vagueness and the loss of V2 syntax, the latter a well-established fact providing a measurable prediction that traditional approaches involving ambiguity and reanalysis do not make.

- (1) *Lors lui euvrent la porte, et il entre ens.*  
 then him.DAT open.3.PL.PRES the gate and he enters.3.SG.PRES in  
 (Arras, 103)

- a. ‘Then they open the gate for him, and he goes in(ward)’  
 [<sub>VP</sub> entre [<sub>DirP</sub> **ens** [<sub>PathP</sub> <entre> ...]]]
- b. ‘Then they open the gate for him, and he goes inside (the castle walls)’  
 [<sub>v/PathP</sub> entre [<sub>PlaceP</sub> **ens** pro]]

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## Information Density as a Measurement of Processing Difficulties in Historical Data

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Keywords: Corpus Linguistics, German, New High German, Information Density, Extraposition

Throughout the history of German, word order variations occur. Though these variations do not necessarily change the sentence proposition, they influence the incremental reading of the sentence and its processing. An unsuitable usage of free word order can cause perceiving difficulties. For modern data, this phenomenon can be investigated using questionnaire, reaction time or eye-tracking studies (Mueller 2013, Dietrich & Gerwien 2017 among others). For historical data, however, other methods are required to investigate word order variation and its impact on parsing difficulties, like Shannons' (1948) Information Density (ID).

ID can be defined as the “amount of information per unit comprising the utterance” (Levy & Jaeger 2007, 1). It is mathematically defined as the negative logarithm of the probability of an element given in a context:  $P(\text{word}) = -\log_2 p(\text{word}|\text{context})$ . The resulting surprisal values (P) express different impacts on working memory. Low surprisal values cause small impacts whereas high surprisal values might cause perceiving difficulties. The link between ID and processing effort has already been shown (Jurafsky 2003; Crocker & Brants 2006 among others). Via language models (Hale 2001) ID can be calculated for any data.

We want to present the application of ID in investigating variable positions of relative clauses (RC) in early New High German. RC can be placed adjacent to their antecedent (1) or separated from it (2).

- (1) Sharon read the book *that I recommended* yesterday.
- (2) Sharon read the book yesterday *that I recommended*.

Information disentanglement (Zifonun 1997) and the facilitation of understanding is often mentioned as an explanation for this variation. In German, verbal material (“right sentence bracket” Wöllstein (2010)) usually intervenes between antecedent and RC. The right sentence bracket marks the end of the clause. Behind it more cognitive capacities are free again (Gibson 1998).

We therefore propose that RC with high surprisal values would put too much strain on the working memory when placed adjacent to the antecedent and are thus extraposed (meaning separated from it). For modern data this notion has already been proposed by Arnold et al. (2002), Wasow (2002) and Hawkins (2004).

We measure processing difficulties by calculating accumulated surprisal values and check the concept for historical data. As a corpus, we used scientific texts from 1600 to 1900 taken from the *Deutsches Text Archiv* (DTA), manually annotated the RC variants and calculated a skipgram language model based on the lemmata of the texts for every 50 years of the corpus for every RC. Their processing effort was then calculated by adding up the surprisal value of every word in the RC. We find a significant difference between adjacent and extraposed RC for all periods with only slight variations (Figure 1). RC with high surprisal values are more likely extraposed ( $z = |12.17|$ ,  $p < 0.001$ ), because more cognitive capacities are free at that position.

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## WORKSHOP 6

### Complex predicates across languages: Variation and acquisition

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(Universidad Nacional de Educación a Distancia)

Keywords: complex predicates, predication, argument structure, language acquisition, language variation

Ever since Plato and Aristotle, the notion of predication has been one of the central issues in philosophy (Cocchiarella 1989; Angelelli 2004). In linguistics, predication has been one of the most prominent research areas since the 19th century (Bloomfield 1916; Williams 1980; among many others), including today's modern theories of argument structure (Hale & Keyser 2002; Marantz 2013; among many others). The main challenge in linguistic research focused on predication has been to adequately represent the crucial relation between a predicate and its arguments, which forms a core construct at all major levels of linguistic analysis. In this, and in many other respects, *complex predicates* have attracted a lot of attention because they differ considerably from canonical predication in their internal composition, syntactic and semantic properties.

Loosely defined, complex predicates are composed by several grammatical elements acting together as a single predicate (Kayne 1975; Larson 2014; Snyder 2001). This definition in and by itself admits a lot of constructions, starting from complex tenses (Muller 2006) to serial verb constructions (Haspelmath 2016) and resultative predicates (Beavers 2012; Goldberg & Jackendoff 2004), among others. One of the main problems that has been raised in complex predicate literature (Butt 1995, Alsina et al. 1997) is how to define the empirical domain covered by the term complex predicate. In this workshop, we will be interested in syntactic configurations that involve complex predicates such as:

- Complex V-V heads.
- Double object constructions.
- Light verb constructions (e.g. *make*-causatives, English causative *have*, Spanish *tener+que*+infinitive construction, etc.).
- Perceptual reports.
- *Put*-locatives.
- Resultatives.
- Verb-particle constructions.

Since complex predicates form such a heterogeneous class of constructions, the inevitable question that emerges concerns the grammatical mechanisms behind their composition (i.e. their syntax and semantics). Snyder (2001) assumed that complex predicates consist of a main verb combined with a secondary predicate and both constituents form a new expression that is semantically akin to a simple verb. Other approaches that account for the combination of a main verb and a secondary predicate, forming a syntactic complex predicate (Larson 2014, 1988), resort to the verbal subcategorization for a small clause that contains the internal arguments of the complex predicate constructions (Aoun and Li 1989; Den Dikken 1995; Kayne 1975; Koizumi 1994; among others).

Apart from being theoretically challenging, complex predicates also represent a rich source of cross-linguistic variation. The examples are numerous and include well-studied verb-particle constructions (Dehé et al. 2002; McIntyre 2012; Snyder 2001) or resultative constructions (Levin & Rappaport 1988; Nedjalkov 1988; Goldberg & Jackendoff 2004; Beavers 2012), which are widespread in Germanic languages but highly restricted (if at all present) in Romance languages (Cuervo 2007; Demonte 1995). Both verb-particle constructions and resultatives have been shown to present interesting challenges for the syntax-semantics interface and many analyses directly link their syntactic structure to their semantic properties. Diverse data from different languages raise the question of what the source of cross-linguistic variation could be, what kind of analysis could capture this variation and what the repercussions of the suggested analysis are for other phenomena related to complex predicate formation and their properties across languages.

Besides, language acquisition data can provide important underpinnings for theoretical analyses. Indeed, a great bulk of empirical studies has reported that complex predicates begin to be produced at around the same age, as analysed in L1 English children's acquisition data (Snyder & Stromswold 1997) and in simultaneous English-Spanish bilingual children's data (Sánchez Calderón 2018). These findings suggest that the constructions listed above are acquired as a package of complex predicate constructions and, thus, share common grammatical properties. In the case of second language acquisition, a challenge has been found to arise in adults' learning of complex predicates as a result of L1 influence (Slabakova 2001; Cuervo 2007) or adult input factors (Perpiñán & Montrul 2006).

This workshop aims at bringing together theoretical and empirical research raising challenging questions concerning composition, syntax, semantics and acquisition of complex predicates from a variety of languages with the goal to improve our knowledge of complex predicates and thus, of the process of predication itself. Main research questions to be addressed in this workshop include, but are not limited to, the following:

1. Why do complex predicates exist in natural language and what can they tell us about the nature and design of language as well as other cognitive systems?
2. How can we account for a great variety of constructions that are characterized as complex predicates?
3. What are the common syntactic and semantic properties shared by various complex predicate constructions?
4. How are complex predicates acquired in first and second languages?

More specific questions also include:

1. What is the role and/or status of light verbs such as the English causative *have* in the formation of complex predicates?
2. What is the relation, if any, between complex predicates and other related constructions such as reflexive-like clitics?
3. What are the shared underlying grammatical properties, if any, between complex predicates and applicative heads?
4. What kind of semantic mechanisms are involved in complex predicate formation?
5. What is the age of onset of complex predicates across languages, as examined in child first language acquisition?
6. What is the role played by adult input/language exposure in the acquisition of complex predicates, as analysed in simultaneous bilinguals, sequential bilinguals and second language learners?

7. Does the other L1 interfere in the acquisition of complex predicates in the case of simultaneous bilinguals, sequential bilinguals and second language learners?

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children's skills into two language activities is a good way to examine these causative devices' proficiency levels. The two issues have rarely been considered in previous research.

Our study included 113 French L1 speakers (71 children and 42 adults) and 96 Bulgarian L1 speakers (56 children and 40 adults). Children were divided into three age groups (3-4, 4-5 and 5-6 years old). They participated in two experimental tasks. The first task was *production*, consisting of watching animated cartoons with causative actions and answering three gradual questions: *What X did? What Y did? What X did to Y?* The second task was *comprehension*, consisting of simulating causative actions with plastic figurines. Adults took part only in the production task.

Results indicate that the Bulgarian formally less complex periphrastic causative is acquired earlier than the French *faire + Vinf* complex predicate. Unlike their French peers, Bulgarian 4-to-5-year-olds show adult-like production performances (93% vs 67%). Morphosyntactic complexity seems then to play a crucial role in the causatives' acquisition process. Our data also reveal that between 3 and 6 years of age, children's comprehension performances with syntactic causatives exceed those in production (65% vs 25% for French; 75% vs 18% for Bulgarian). Therefore, at this developmental stage, French and Bulgarian analytic causatives appear to be sufficiently available for both language activities: production and comprehension.

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## **How complex are verbal periphrases to learn and unlearn? The case of <ir/andare a + infinitive> from L1 Spanish to L2 Italian**

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Keywords: periphrasis, Romance languages, acquisition, unlearning

Both Spanish and Italian make use of verbal periphrases (Olbertz 1998; Squartini 1998), some of which have the same structure in the two languages. However, Spanish periphrases tend to have a wider array of values and uses compared to their Italian counterparts. This is also the case of the periphrasis we deal with here, that is, It. <*andare a* ‘go to’ + infinitive>. This Italian periphrasis has

culminative and (more rarely) inchoative values, while Sp. <ir a ‘go to’ + infinitive> does not display the culminative value but has modal values and is widely used to express imminentiality and planned future (Garachana 2018). How do L1 Spanish learners of Italian deal with L2 periphrases such as <andare a + infinitive>, that despite formal similarity display fewer tempo-aspectual values than the Spanish ones?

We present here the results of two experimental studies. The first one uses a picture-based dialogue description task and immediate recalls to ascertain whether and to what extent L1 Spanish learners of Italian manage to use <andare a + infinitive> with its target language values only. The second one employs non-timed grammatical judgements and a completion task. Our informants are instructed Spanish-speaking learners of Italian with different proficiency levels, as well as a control group of Italian native speakers.

The results of the first study highlight that neither long-time exposure to Italian nor formal instruction are sufficient to prevent L1 Spanish speakers from transferring the whole array of aspectual values of these periphrases to their Italian interlanguage. This results in non-target uses of forms, as in (1) where the periphrasis is used instead of the morphological future (*sarò/diventerò*). :

- (1) \**vado a essere un ingegnere*  
 go.PRS1SG to be.INF a engineer  
 ‘I will be/become an engineer’

The second study confirms this result, and also shows that L1 Spanish speakers tend to judge as correct periphrastic uses that native speakers judge as fully agrammatical, though results vary not only with the level of proficiency (as expected) but also with specific values (modal / aspectual / temporal). We will discuss the results in light of the following theoretical points. First, the difficulty in dropping L1 additional values of the periphrasis may be motivated by the fact that unlearning is more difficult than learning (Gass, Mackey 2002), being it based on indirect negative evidence (Bruton 2000): Spanish speakers have to notice the *non-appearance* in the input of an L1 value with an L2 item which is formally very similar to an L1 item. Second, the use of periphrases is a fruitful strategy for L2 learners, because it allows expressing a cluster of tempo-aspectual values by relying only on the inflectional morphology of *andare* (Ellis, Sagarra 2010). Finally, we also discuss these findings in light of the widespread tendency of periphrastic forms to take over morphological future in many Romance languages and varieties (Dahl 2000; Blas Arroyo 2008), and of the ongoing expansion of inchoative uses of <andare a + infinitive> in Italian (Levie 2016).

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The syntax and semantics of multiple V-V-V constructions

Yoshio Endo

<pdf>

## Persian Complex Predicates, Syntactic or Morphological Units

Fatemeh Faroughi

Persian employs a large number of Complex Predicates (CPs). These CPs consist of a non-verbal element (NV) and a light verb (LV). The NV element can be a noun, an adjective, an adverb, or a prepositional phrase followed by an LV. (1) illustrates a simple verb vs CP in Persian.

- |                       |                 |               |
|-----------------------|-----------------|---------------|
| 1) a. <i>neveštan</i> | b. <i>kušeš</i> | <i>kardan</i> |
| ‘to write’            | try (GER)       | do            |
|                       | ‘to try’        |               |

According to Goldberg (1995), and Vahedi-Langerudi (1996), Persian CPs have a dual nature, as they can be regarded as either lexical/morphological or syntactic units. Karimi-Doostan (1997) claims that the following properties are indications of their morphological nature: (i) they can function as predicates in the same way as simple verbs (ii) they can serve as input to manner adverb formation by means of the suffix *-a:n*, see (2) (iii) in one CP type the two parts are non-separable, for instance a modifier cannot intervene between them, see (3).

- 2) Ali ***geryekon-a:n*** ?a:mad  
Ali cry-DOING came  
‘Ali came while crying.’

### Modification and non-separability

- 3) \*Ali be ra:dio guš-e xubi kard  
Ali to radio ear-Ez. good DO-Past  
‘Ali listened to the radio well’

There is also evidence, however, indicating that an NV and LV sequence can be split by morphological items such as the negative particle and imperfective affixes (4) and direct object clitics (5).

- 4) Ali be. ra:dio guš ne – mi – konad  
Ali to radio ear Neg.Impf.DO.Pr.

- ‘Ali does not listen to radio.’  
 5) Ali guš-eš kard  
 Ali ear-it do-past  
 ‘Ali listened to it.’

(4) and (5) show that as lexical units they can undergo morphological rules; however, a morphological approach cannot account for the syntactic separability of the two parts of CPs under certain circumstances. Cases such as separation, and gapping seem to have been overlooked. In particular, the two grammaticalized auxiliaries, *da:stan* ‘to have’ (6), and *xa:stan* ‘will’ (7) can separate NVs from their LVs in Persian.

- 6) Ba: Ali harf **da:ram** mizanam  
 With Ali talk prog.Aux Impf.Beat.sg.1<sup>st</sup>  
 ‘I am speaking to Ali.’  
 7) Man bezudi ?este?fa:? **xa:ham** dad  
 I soon resignation Fu.Aux give.past  
 ‘I will resign soon.’

Moyne (1970) categorizes Persian CPs into compounds and pseudo-compounds. In his approach compounds constitute a small set of CPs that are formed in the lexicon and, they are unproductive and frozen. Pseudo-compounds are syntactic constructions that can undergo derivation, including participle formation, as well as syntactic processes like movement (e.g. subject-raising) and gapping. The variation in the classification of CPs in the literature as morphological vs. syntactic indicates that it is a theoretical challenge to draw a line of demarcation between the domains of morphological and syntactic rules.

In the talk I will present an analysis of the two major types of Persian CPs in the framework of Lexical-Functional Grammar (LFG). I will use Moyne’s approach as a point of departure. I will show that Moyne’s pseudo-compounds can be treated completely lexically, and his compounds can be analyzed as syntactic constructions by capturing their certain properties in the lexical component of LFG.

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## Complex predicates as a testing ground for linguistic theories/concepts

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Keywords: V-V compounds, argument structure matching, thematic proto-roles, Japanese

ARGUMENT SYNTHESIS – determining an ARGUMENT STRUCTURE (ARG-ST) – in lexical V<sub>1</sub>-V<sub>2</sub> compounds in Japanese (Kageyama 1988, Matsumoto 1996, Nishiyama 1998, Fukushima 2005,

Yumoto 2005, inter alia) offers challenges and obstacles for grammatical relations (GRs) and rigid thematic roles (RTRs). Employing THEMATIC PROTO-ROLES (Dowty 1991), this paper reveals the necessity and a method for more adequate/flexible ways to characterize the arguments' semantic properties of component verbs.

Generally, argument synthesis is straightforward: e.g. in intransitive *hasiri-saru* 'run-leave' the 'subjects' or 'agents' of  $V_1$  and  $V_2$  are matched to form the ARG-ST of the compound. Likewise, in transitive *tataki-kowasu* 'hit-destroy', the subjects/agents and the 'direct objects'/'themes' are matched, respectively. However, there are intricate patterns requiring more than simple GR or RTR identity. One example is (1).

- (1) Sebiro-ga                      ki-kuzure-ta.  
suit.jacket-NOM wear-get.out.of.shape-PAST  
'A suit-jacket got out of shape due to (someone's) wearing.'

Matching the 'subjects' of transitive  $V_1$  and intransitive  $V_2$  gets you a wrong result since a jacket cannot wear anything. Also, neither GRs nor RTRs help in (2).

- (2) Ie-ga                      ne-sizumat-ta.  
house-NOM fall.asleep-become.quiet-PAST  
'A house became quite due to (the occupants') falling asleep.'

The subject of  $V_1$  is simply ignored, or the theme arguments of  $V_1$  and  $V_2$  would have to be matched but a house does not sleep. (If not theme here, what would they be? RTRs are nebulous!)

Here is a solution. Thematic proto-roles can characterize semantic properties of verbal arguments in a more fine-grained manner. 'Proto-agent' and 'proto-patient' are *clusters* of properties (i.e. entailments for verbal arguments). The former encompasses (i) volitional involvement in the event or state, (ii) sentience, (iii) causing an event or change of state in another participant, (iv) movement (relative to another participant), and the latter (i) undergoes change of state, (ii) incremental theme, (iii) causally affected by another participant, (iv) stationary (relative to another participant).

Argument synthesis is *head-driven* in head-final Japanese and matching begins from the least oblique arguments (following Fukushima 2005). The object of  $V_1$  and the subject of  $V_2$  are matched in *ki-kuzure* of (1) above, possessing proto-patient properties (undergoes change of state and causally affected, respectively). With no match, the subject of non-head  $V_1$  (proto-agent with volition) is dismissed. For *ne-sizumat* in (2), the subject of  $V_1$  (sentience) is a proto-agent while that of  $V_2$  is a proto-patient (undergoing change of state). Due to conflicting entailments and both Vs being intransitive,  $V_1$ 's subject is dismissed and only that of head  $V_2$  is retained in the ARG-ST of the compound.

The current takeaway is that either GRs or RTRs under-/over-generate when employed for argument matching in the domain of complex predicate formation. They are unsuitable not only for adequate empirical description but also for conceptual/theoretical purposes. A viable alternative is the concept of thematic proto-roles, enabling more flexible characterization of verbal arguments.

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## Telicizing light verbs in Poshkart Chuvash

Fedor Golosov

Chuvash features complex predicates (see, for instance, [Lebedev 2016]) – constructions consisting of two verbal forms denoting a single event. Consider the example below:

- (1) *vacə*    *εur-za*            *ka-rʲ-ə*  
 V.        sleep-CV\_SIM        go-PST-3SG  
 ‘Vasya felt asleep.’

In (1), the main verb *kaj*, which means ‘go’ in its lexical usage, does not denote its own situation, but is used as an actionality modifier. Such grammaticalized verbs are called light verbs, while the governed converbs denoting a modified event are called lexical verbs.

In the Poshkart dialect of Chuvash, there are many light verbs which have different aspectual, directive or valency-changing functions. My research is dedicated to the verbs *kaj* ‘go’, *jer* ‘send’, *lart* ‘seat’, *lar* ‘sit down’, *pərak* ‘throw’ and *tək* ‘scatter’, which have all been grammaticalized into telicizing operators, i. e. they form telic complex predicates, as in (2), where the traditional adverbial test is applied:

- (2) *vacə*    *avdan-a pər*    *minut*    *xoş-in-ǰe//*    *\*xoş-i*    *pula-za*            *pərak-rʲ-ə*  
 V.        cock-OBJ 1        minute    period-P\_3-LOC    period-P\_3    strangle-CV\_SIM    throw-PST-3SG  
 ‘Vasya strangled the cock in a minute/\*for a minute.’

These light verbs differ in terms of their selectional restrictions and more precise semantics. First, telicizers have different requirements to the **argument structure** of the lexical verb. Light verbs *kaj* ‘go’ and *lar* ‘sit down’ combine only with intransitive verbs with patient-like object, such as *tip* ‘dry (intr.)’ or *εon* ‘burn (tr.)’. Light verbs *jer* ‘send’ and *lart* ‘seat’, in contrast, combine only with stative and agentive predicates (transitive or intransitive). Finally, light verbs *pərak* ‘throw’ and *tək* ‘scatter’ combine mostly with transitive verbs, preferably with an affected object (see the notion of affectedness in works [Hopper&Thompson 1980; Beavers 2011]), such as *εəmər* ‘break’ or *vələr* ‘kill’.

The light verbs also have **semantic restrictions**, associated with their **more precise aspectual meaning**. Light verbs *kaj* ‘go’ and *jer* ‘send’ are “**simple**” telicizers, i. e. they form complex predicates denoting the culmination point of the event, as in (3):

- (3) *vacə*    *εirəm*    *minut*    *xoş-in-ǰe*        *abat*    *εi-z=er-tə-ë*  
 V.        20        minute    period-P\_3-LOC    dinner    eat-CV\_SIM=send-PST-3SG  
 ‘Vasya ate the dinner in 20 minutes.’

Light verbs *lart* and *lar* form complex predicates that denote **a significant change of state of the undergoer of an action on some scale**, like in (4):

- (4) *təaj* (\**təuti*) *sin-ze* *lar-tə-ə*  
tea a.bit cool-CV\_SIM sit.down-PST-3SG  
'Tea cooled (\*a bit).'

Light verb *pərak* forms complex predicates denoting that the **object enters a state of local exhaustivity**:

- (5) *væə* *ʂa* ??(*itla*) *əzət-sa* *pərak-ri-ə*  
V. water.OBJ overly heat-CV\_SIM throw-PST-3SG  
'Vasya overheated the water'.

Finally, light verb *tək* forms complex predicates denoting **a pluractional event**:

- (6) *væə* *lista-ja* (\**əorma-la*) *paj-la-za* *tək-ri-ə*  
V. 1 list-OBJ half-ATTR part-VBZ-CV\_SIM scatter-PST-3SG  
'Vasya tore the sheet into (\*two) parts.'

In my talk, I will discuss the forementioned properties of the light verbs in more details and comment on their possible analysis in the framework of the first phase syntax used for analysis of the similar constructions in Indo-Arian languages [Ramchand 2008; Ozarkar & Ramchand 2018].

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Complex Predicates in a Language Shift Environment: Sakha

Emre Hakguder, Lenore Grenoble & Jessica Kantarovich  
<not updated>

### Udmurt Complex Predicates with 'give', 'throw' and 'leave'

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Keywords: grammaticalization, aspect, converb constructions, complex predicates, typology

This presentation examines the features of some of the grammaticalized converb constructions (CVBC's) used in Udmurt, an endangered Finno-Ugric language spoken in Russia.

In Udmurt, converb constructions with *-sa* converb can express some sort of adverbial subordination:

- (1) Ižkar-yn, mon dory kotyr-ez kel'ty-sa,  
 Izhkar-INE I to belonging-ACC leave-CVB  
 košk-i-m bilet-jos-ly Syrjez-e.  
 go\_away-PST-1PL ticket-PL-DAT Syrjez-ILL  
 'In Izhkar, after leaving our belongings in my place, we went to buy tickets to Syrjez.'  
 (UdmCorp.)

These constructions can also be grammaticalized: in these cases, usually, the converb provides the lexical meaning and the other component loses some of its lexical properties: syntactically, it functions like a main verb but is interpreted rather as an auxiliary. This latter component is drawn from a restricted set of verbs, often from verbs of motion, posture verbs, phasal verbs, and verbs denoting other activities (for instance, 'give', 'take', 'throw'). The auxiliary *śotyny* (< 'give'), for example, can encode a perfective event that takes place for someone's benefit (benefactive/perfective marker):

- (2) tazalyk-ez řabž-em-en, bydes gažet-ez  
 health-3SG weaken-PTCP-INS whole newspaper-ACC  
 lydžy-sa śot-iško.  
 read-CVB give-PRS.1SG  
 'Because he is not in a good condition, I read [him] the whole newspaper' (UdmCorp.)

Similar multi-verb constructions are used in other languages of the Volga-Kama Sprachbund as well (cf. e.g., Bradley 2015, Johanson 2011) but the phenomenon is also quite common cross-linguistically (Bybee 2010: 148, Drude 2011) and can be regarded as similar to the so-called asymmetrical serial verb constructions (Aikhenvald 2011, Amha and Dimmendaal 2011, see also Bisang 1995).

The interpretation of CVBC's may depend on the semantics of the converb and the finite verb, as well as on the pragmatic and syntactic contexts of the construction: the primary lexical meaning of the auxiliary can be retained to different extents in different environments. In the examples (3)–(4), for example, the verb *kel'tyny* 'leave' is considered to be a perfective aspective marker. However, the construction seems to be less grammaticalized in example (3), where it is rather to be interpreted as two consecutive events (because of the adverbial phrase *śures vyle*), while in (4), there is no illative argument involved: the construction describes a single event and seems to be more grammaticalized:

- (3) no śures vyle ton-e žugy-sakel't-o-zy.  
 and road on.ILL you-ACC beat-CVB leave-FUT-3PL  
 'And they will beat you up and then leave you on the road.' (UdmCorp.)
- (4) vetl-em-zes odno\_ik gožty-sa kel't-o.  
 visit-NMLZ-ACC.3PL definitely write-CVB leave-FUT.1SG  
 'I am definitely going to write about their visit.' (UdmCorp.)

In my presentation, I aim to examine the different aspectual functions and usage of three verbs (*śotyny* ‘give’, *kuštyny* ‘throw’ and *kel’tyny* ‘leave’) used in different grammaticalized CVBC’s and different environments from a typological point of view. I aim to outline the problematics of interpreting and classifying these constructions, paying attention to some ambiguous cases and typological parallels as well. I will rely on examples collected from an Udmurt electronic corpus (UdmCorp.), as well as questionnaires and structured interviews conducted in Udmurtia and Tatarstan in 2015/2016.

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In support of post-syntactic head movement: loanword accommodation in Kunbarlang verb phrases

Ivan Kapitonov & Pavel Rudnev

<not updated>

### **Crosslinguistic influence in L3 acquisition: Evidence for non-facilitative transfer from the acquisition of resultatives in L3 Spanish**

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Keywords: crosslinguistic influence, L3 Spanish, resultatives, non-facilitative transfer

**Aims:** This study provides evidence for non-facilitative transfer in L3 acquisition, as predicted by the Linguistic Proximity Model (Westergaard et al. 2017) and Slabakova's (2017) Scalpel Model, by examining the acquisition of word order properties and the expression of result states at the initial stages of L3 Spanish.

**Linguistic background:** We investigated the potential transfer of three grammatical properties, each shared by any two of the languages spoken by the subjects, but not the third one. The various pairings ensured the possibility of different types of transfer selection.

I. (a) Topicalization: Spanish and Hungarian (L1) are similar in that they allow topics to occupy the sentence-initial position and precede the verb and the subject. This is not possible in English (L2) (\**Yesterday worked Peter*). Transfer from Hungarian to Spanish is expected to be facilitative.

I. (b) Preposition-stranding: Contrary to I (a), the movement of constituents of a prepositional phrase is disallowed in Spanish and Hungarian, whereas it is acceptable in English (*What did you argue for in your essay?*). Transfer from English is expected to be non-facilitative.

II. The expression of result states: Spanish does not normally use resultative constructions to express events culminating in some result state. By contrast, resultatives are natural in English (*Sam wiped the wet floor of the room dry*) (Beavers 2012) and Hungarian. Here neither the L1, nor the L2 can be facilitative. Non-resultative descriptions of the achievement of a result state (*Sam wiped the wet floor of the room until it was dry*) are acceptable in all three languages.

**Participants:** 50 non-immersed learners participated in our experiment, out of which 10 learners met our selection criteria (A1-level Spanish, B2-level English). We also had 20 Spanish, 13 English and 24 Hungarian controls.

**Materials:** The experiment consisted of an acceptability judgement task, where participants had to rate sentences which were constructed to test the different conditions as well as unequivocally bad and good sentences on a 7-point Likert scale.

**Procedure:** The learners completed the experiment in all three languages at different times. In the Spanish and English experiments, data were collected in a classroom setting; however, the Hungarian experiment was administered remotely due to Covid-19. The controls also completed the experiment remotely. We used the Labvanced online stimulus presentation system in all cases.

**Results:** We performed a Wilcoxon signed-rank test to compare pairs of acceptability judgments for contrasting sentence types (e.g. resultatives were compared to non-resultative descriptions of the same events in each language), which revealed no significant difference between the scores for resultative and non-resultative sentences in the Spanish experiment completed by the learners, showing non-facilitative transfer from English and/or Hungarian. No evidence was found for such transfer in the case of the acquisition of I (a) and (b).

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## The role of image schemas and force dynamics in the formation of Croatian complex predicates: the case of the light verb *baciti*

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Keywords: Complex predicates, light verbs, image schemas, force dynamics, Croatian

In the context of Central South Slavic languages, the phenomenon of complex predicates has been the object of detailed analysis since at least Radovanović 1977 [1990]. Within his generatively inspired structuralist framework, what counts as a *decomposed predicate* (i.e. complex predicate) is “every two-member predicate constructed following the formula *Verbum (verb copula or semi-copulative verb) + Nomen deverbativum*, which is synonymous (and therefore commutable) with a semantically equivalent single-member predicate (represented by an autosemantic verb lexeme from which the deverbative noun of the two-member predicate is derived)” (Radovanović 1990: 53). Though supportive of the contention that the verbal constituents of such constructions should be regarded as “semantically empty” (see Renský 1966), Radovanović clearly recognizes the systematicity of the resultant verbo-nominal phrases, noting that they represent “relatively stable associations of deverbative nouns with corresponding copulative or semi-copulative verbs” (Radovanović 1990: 57).

The present paper focuses on a subset of such combinations containing the verb *baciti (se)*, e.g. *baciti se u trošak* ‘go on a splurge’ (lit. ‘throw oneself into expense’), *baciti (koga) u očaj* ‘throw (sb) into despair’, *baciti pogled (na što)* ‘take a look (at sth)’ (lit. ‘throw a look’). In line with usage-based constructional approaches (see Langacker 1987/1991, Goldberg 1995), any complex structure that is formed through the association of a verb and a noun (sometimes mediated by a preposition) is regarded as a *construction*, i.e. “an assembly of symbolic structures linked by correspondences and categorizing relationships” (Langacker 1987: 5). Furthermore, in contrast to much research on grammaticalization, in which the loss of referential content and gain in procedural function that is characteristic of the verbal constituent is regarded as *desemanticization* (see Lehman 1982), it will be argued that light verbs are best explained in terms of the cognitive process known as *schematization* (Langacker 1987: 68).

However, in addition to acknowledging their schematic nature, the present paper also aims to demonstrate that light verbs are inextricably bound with their heavy counterparts, and therefore to provide support for the claim that “the light verb use or uses of the lexeme resemble heavy or basic use or uses of the same lexeme in importing some part of the force-dynamic schema, usually existing in the basic use in the physical domain, to some more abstract domain which includes psychological (intentional or intensional) factors.” (Brugman 2001: 560)

The pairing of the light verb *baciti (se)* with prepositional phrases (e.g. *baciti se u trošak*) and with bare accusative nominals (e.g. *baciti pogled*), as well as its role in the overall scene construal (cf. *baciti (koga) u očaj* ‘throw sb into despair’ – *pasti u očaj* ‘fall into despair’), will thus be regarded as explicable with reference to *image schemas* (Lakoff & Johnson 1980) and *force dynamics* (Talmy 1988).

Complemented by data from actual usage (the World Wide Web and the Croatian Web Corpus, both inclusive of low-register texts such as those found on blogs and forums), the present study will also reexamine the assumption that Croatian complex predicates are predominantly characteristic of high-register texts.

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## Complex verbs in Bezhta

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Keywords: serial verbs, light verb constructions, inchoative, causative, Tsezic languages

The paper describes the morphosyntactic and semantic properties of complex verbs in Bezhta, a Nakh-Daghestanian language. Bezhta complex verb constructions include light verb constructions and serialization.

There is a distinct class of light verbs, which consist of two parts, the lexical word, which is a loan from Avar or Russian, and the light verbs *y-aqal* ‘to happen’ and *y-owal* ‘to do’ (Comrie, Khalilova and Khalilova 2015). With the intransitive light verb *y-aqal* ‘to happen’, the construction is intransitive or affective; with the transitive light verb *y-owal* ‘to do’, it is transitive. Many intransitive and affective compound verbs based on *y-aqal* ‘to happen’ derive transitives by changing the light verb to *y-owal* ‘to do’; *kezi y-aqal* ‘to meet (affective)’, *kezi y-owal* ‘to introduce (transitive)’, and *uryezi y-aqal* ‘to think’, *uryezi y-owal* ‘to cause to think’.

Another complex verb construction can be analyzed as a serial verb construction, which is formed with the transitive verbs *gol-* ‘PUT’ (with gender-number variants *gul-*, *gil-*, *guw-*) and *tok’-* ‘MAKE’ (with gender-number variants *tik’-*, *tuk’-*, *tuwak’-*). Complex verbs with *gol-* ‘PUT’ and *tok’-* ‘MAKE’ form transitive verbs from intransitives, e.g. *k’isal* ‘to play’ > *k’isa-golal* ‘make play’.

The inchoative-causative light verb pairs and causative serial verbs have common morphosyntactic properties: they are monoclausal, have same subject, behave as a single phonological unit. Such complex verbs are formed by juxtaposing two verbs: the first verb is always lexical and the second is a light verb. The first verb appears as a stem without any further suffixes. The second verb

attaches derivational and inflectional suffixes. Two verbs in the complex construction share gender-number agreement. No other constituents may intervene between two verbs (except one enclitic). In these verbal complexes, the argument encoding is always determined by the second verb.

The most productive complex verbal construction is formed with intransitive verb *-UB-* ‘die’. It combines properties of complex constructions and morphologically bound complementation (Maisak 2016). Unlike other verbal complexes, constructions with *-UB-* ‘die’ are the result of clause union. The main criterion for clause union analysis is that the argument structure of the construction is determined by the embedded verb, i.e. by the lexical verb, but not by the light verb. The construction with *-UB-* ‘die’ can be derived from intransitive, transitive, affective verbs. The construction with *-UB-* ‘die’ expresses the completive/terminative aspect, something like ‘X has finished doing smth’.

All complex constructions have common morphosyntactic features (shared subject, TAM, negation, agreement patterns), but the main difference is the argument encoding: it is either the light verb or the lexical embedded verb, which determines the argument encoding.

Complex constructions, including serial verbs, are widely discussed by Aikhenvald (2006), Haspelmath (2016), Amberber, Baker and Harvey (2010) and others, and various definitions of the phenomenon exist. The paper investigates the morphosyntactic features of Bezhta complex verbs and semantic mechanisms used in verbal complex formation. It also considers similar phenomenon in closely related Tsezic languages, which is crucial for defining and understanding the complex verbal structure in the given area.

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## The Roles of Verbs and Nouns in Japanese Light Verb Constructions

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Keywords: light verb; verbal noun; argument structure; agentive subject; non-agentive subject

One prominent issue in light verb constructions, whose predicate is composed of a light verb plus a nominal, is how their arguments are realized. In Japanese, light verb constructions are formed by combining the light verb *suru* ‘do’ with a verbal noun (VN), as in (1).

- (1) a. Ken-ga **benkyoo-o si-ta**.

- Ken-Nom study-Acc do-Past  
 ‘Ken studied.’
- b. Kazan-ga **hunka-o** **si-ta.**  
 volcano-Nom eruption-Acc do-Past  
 ‘The volcano erupted.’

Some researchers (e.g. Grimshaw and Mester 1988) claim that the light verb does not have an argument structure (AS) of its own, while VN assigns all theta roles to the arguments. But other researchers (e.g. Uchida and Nakayama 1993) propose that the light verb has its own AS, and selects some, if not all, arguments.

I argue that in Japanese, the light verb *suru* has an AS of its own, but that its AS differs according to whether it forms an agentive or non-agentive construction. Evidence for this proposal may be adduced from an asymmetry in applicability of scrambling to the subjects, exemplified in (2).

- (2) a. Benkyoo-wa Ken-ga si-ta.  
 study-Top Ken-Nom do-Past  
 ‘Study, Ken did.’
- b. \*Hunka-wa Kazan-ga si-ta.  
 eruption-Top volcano-Nom do-Past  
 ‘Erupt, the volcano did.’

In Japanese, arguments can be scrambled rather freely as long as the predicate is placed at the clause end. The VN in (2a) can be scrambled to the sentence front, but this is not possible with the VN in (2b).

I argue that the VN in (2b) cannot be scrambled because the non-agentive subject is supplied by VN via argument extraction.

- (3) a. [ SUBJECT VN *suru* ]  
 b. [ SUBJECT [ SUBJECT VN ] *suru* ]
- 

There is a general syntactic constraint that a moved argument must c-command its trace. Thus, if an argument is extracted from VN, the extracted argument must be placed to the left of VN. This effect is observed in (2b), but not in (2a), showing that the agent subject in (1a) is non-derived, while the non-agentive subject in (1b) is derived by extraction from VN.

I suggest that the distinct derivations are invoked for (1a) and (1b) because of the transitive and intransitive AS's available for *suru*, which is suggested by the examples in (4).

- (4) a. Ken-ga yakyuu-o si-ta.  
 Ken-Nom baseball-Acc do-Past  
 ‘Ken played the baseball.’ <agent, theme>
- b. Henna nioi-ga si-ta.  
 strange smell-Nom do-Past  
 ‘A strange smell occurred.’ <theme>

In (1a), the subject and VN appear as non-derived arguments, as in (3a), since *suru* equipped with <agent, theme> can assign an agent role to the subject, and a theme role to VN. In (1b), *suru* needs to resort to <theme> (without an agent role) due to the absence of <theme, theme>, which would be

necessary when *suru* assigns two theme roles to VN and the subject. In (1b), *suru* can assign a theme role to VN, but the theme role of the subject must be supplied by VN, so that the subject is generated in VN and is raised to the subject position as a derived argument, as in (3b).

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## Predicate chaining and clause complexes in Hebrew and English: A discourse-based analysis

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Keywords: Predicate Chaining, Clause Packaging, Hebrew, English, Narrative

The study focuses on what has been termed by Berman and Lustigman (2019) “predicate chaining”, as a specific type of clause chaining (McCarthy, 1965) in Modern Hebrew and English. Instances of verb/predicate chaining are typically not considered a case of complex predicates, as they are not part of a monoclausal syntactic structure. However, multi-clausal constructions can also form part of the complex predicates typology (Baker & Harvey, 2010), since co-referential clauses combine together under a single but complex event structure (see Evans, 2010). The current study aims to add to this discussion by considering the discourse-based properties of numerous instances of predicate chains that occur within multi-clausal constructions characteristic of extended discourse, termed Clause Packages [CPs] (Nir, 2015; Nir & Berman, 2010). In these CPs, sub-predications are integrated into a holistic or macro-event structure (cf. Givón, 2009; Bohmeyer et al., 2007) and serve various discursively-motivated functions such as narrative orientation, evaluation, etc. (Berman, 1997; Labov, 1997).

The constructions at the heart of the current study involve cases where co-referential clauses are headed by a monoclausal complex predicate, with a typical causal, modal, aspectual, or attitudinal operator as the initial element. In these constructions, the chained dependent clauses are non-finite and share the same temporal interpretation as the finite head clause, much like what is characteristic of typical complex predicate constructions, such as light-verb constructions (Bowerman, 2008; Butt, 2010). Moreover, the syntactic complex construction itself can be shown to coerce a temporal interpretation on the constituent clauses. Consider the following CP, taken from an English-speaking woman’s oral personal-experience narrative about a fight with a friend, where the italicized clauses convey the particular temporal interpretation of simultaneity, even though the sub-events themselves are sequential:

and like I just wanted her to stay there so I could talk it out with her but um  
but she was like “fine whatever” and so like *she just had Danny leave and  
take her.*

In this excerpt the narrator shares her failed attempt to resolve the conflict with her friend. The CP ends with a causative small-clause construction chaining two non-finite predicates:

[Causer<sub>i</sub> had Causee<sub>ii</sub> V<sub>inf</sub><sup>1</sup> and Ø<sub>ii</sub> V<sub>inf</sub><sup>2</sup> O<sub>i</sub>]

While this resolution includes two separate events (Danny's leaving; Danny taking the friend with him), in the context of this construction they are construed as occurring at the same time. Note, also, the possible reversal of the two non-finite verbs (which would in fact correspond to real-world events).

Taking a discourse-based, comparative perspective, the study examines predicate-chaining constructions as they occur in a particular type of extended discourse – personal-experience narratives of conflict [n=80 texts]. The study considers both the language-specific and the shared semantic, morphological, and syntactic properties of predicate chains, as well as the discursive functions they serve. The study aims to contribute to the understanding of complex predicates by discussing the implications of predicate/clause chaining of the type found in Hebrew and English to issues such as predication, event segmentation, serial-verb constructions (e.g., Foley, 2010), light-verb constructions, and (pseudo-)coordination (cf. Hilpert & Koops, 2008).

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## Verb-particle constructions and prefixed verbs: a case of applicative formation? A diachronic perspective on complex verb formation

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Keywords: Complex predicates - Verb-particle constructions - Prefixed verbs - Applicatives

This paper aims at reflecting on the relationship between verb-particle constructions (VPCs) and prefixed verbs (PVs), to verify whether complex predicate share properties with applicatives. The data will be drawn from Ancient Greek and Latin. Although they have mainly PVs, in their oldest phases (Early Latin and Homeric Greek) they also have VPCs. As has been observed for other languages (e.g., Lüdeling 2000; Iacobini & Masini 2007), there is a link between VPCs and PVs. The connection exists also from the point of view of the predicate complexity. Consider (1-2):

- 1) ἄψ εἰς Ἴλιον ἦλθε  
 àps eis Ílion êlthe  
 again into Ilios:ACC to.go:3SG  
 “he went again into Ilios” (Homer, *Iliad*, 15, 550)
- 2) ἄψ κλισίην εἰσῆλθε  
 àps klisíēn eisêlthe  
 again tent to.go.into:3SG  
 “he went again into his tent” (Homer, *Iliad*, 16, 254)

In verse (2), the PV εἰσῆλθε is a semantically complex verb, encoding both Motion and Path in Talmy’s (2007) terms. Likewise, in (1) there is the encoding of the Motion, through the verb ἦλθε, and of the Path, through the particle εἰς. If we compare (1-2) with (3-4), we can think that also in Ancient Greek, like in Kinyarwanda (Baker, 1988: 238-239), the formation of PVs like εἰσῆλθε is due to the incorporation of a preposition (εἰς) into a verb (ἦλθε), so that εἰσ- appears to be an applicative prefix started out as head of a PP:

- 3) *umwaaana y-a-taa-ye igitabo mu maazi*  
 child SP-PAST-throw-ASP book in water  
 “the child has thrown the book into the water”
- 4) *umwaaana y-a-taa-ye-mo amaazi igitabo*  
 child SP-PAST-throw-ASP-in water book  
 “The child has thrown the book into the water”.

Therefore, the PV εἰσῆλθε could be considered an applicative formation. However, the analysis of the data is not so obvious. Indeed, data from Ancient Greek, Latin and other languages clearly show that the origin of the particle in Indo-European languages is adverbial (cf. Cuzzolin, Putzu & Ramat 2006). Horroks (1984) even denies the presence of prepositions in Homer, although this position is probably excessive (Pompeo 2002). Moreover, the allative accusative on its own is undoubtedly possible (5), just as it is possible to find in Homer cooccurrences of the same verb and the same particle that certainly seem to form a VPC (6):

- 5) ἔρχεσθον κλισίην Πηληϊάδεω Ἀχιλῆος  
 érkhesthon klisíēn Pēlēiádeō Akhiēos

- to.go:2DU tent Peleus' son Achilles  
 “go to the tent of Achilles, Peleus' son” (Homer, Iliad, 1, 322)
- 6) ἐξ δ' ἤλθον μνηστῆρες ἀγίνορες  
 es d' êlthon mnēstêres agénores  
 in PART to.go:3PL wooers proud  
 “then the proud wooers came in” (Homer, Odyssey, 1, 144)

If there is an adverb at the origin of the prefix in PVs, from the diachronic point of view there cannot be an applied object. Nevertheless, this does not exclude an applicative reanalysis, when prefixes are exclusively homophones of prepositions (Lehmann 1983; Romagno 2003; Oniga 2005).

The analysis will be done in a diachronic key and in the CxG perspective. The corpus will consist of the entire Ancient Greek (*ThLG*) and Latin (*ThLL*) literature.

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## Coverbs in the languages of Vanuatu and beyond

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Keywords: coverbs, Vanuatu, Ahamb, Oceanic, Austronesian, verb serialisation

Some languages of Vanuatu (Southern Oceanic, Austronesian) have forms that are involved in forming complex predicates but are not prototypical verbs. Such forms have been termed *coverbs* (Rangelov 2020). It can be argued that, to an extent, coverbs in Vanuatu languages behave like verbs since they appear in constructions where a verb is expected. Namely, coverbs are found in the second slot of constructions that resemble nuclear serial verb constructions, where the two verbs are contiguous and share arguments, cf. the examples in (1) and (2) from Ahamb:

(1) *Mrë-sba-palong*      *husür-i*      *kiaha.*      (prototypical nuclear SVC)  
 2DU-NEG-hear      follow-OBJ      today  
 ‘You two did not obey [the advice] today.’ [40-119]

(2) *Nga-r-yong*      *krov-i*      *van*      *vi*      *ur.*      (coverbal construction)  
 3SG-SBQT-wade      (a)cross-OBJ      go      go.to      shore

‘He waded across it to the shore.’ [34-94]

As can be seen in (2), the coverb *krov* can take an object pro-index, which is normally a characteristic of verbs in this language. However, *krov* differs from prototypical verbs (such as *palong*, *husür*, *yong* in the examples above) in that it cannot form a predicate on its own and cannot take preverbal morphology such as subject indexing or TAM and polarity marking.

Similar forms have been attested in other Vanuatu languages, including Nafsan (Thieberger 2007) and Vurës (Malau 2016). Semantically, coverbs in Vanuatu languages tend to express actions related to killing, breaking and crossing. Morphosyntactically, there are parallels between coverbs on the one hand, and prepositions, adverbs and quantifiers, on the other hand, in some Vanuatu languages. For some coverbs, there is diachronic evidence that they developed from fully-functioning verbs.

This talk reports data on coverbs in the languages of Vanuatu and explores in detail the historical evidence, which suggests lexicalization and grammaticalization of such forms, sometimes in different stages. Evidence of similar processes with such forms exists for Paluai (Schokkin 2014), another Austronesian language. Parallels between coverbs in Vanuatu languages and coverbs in languages in other language families will also be made, more specifically in East Asian languages where similar forms have been reported (e.g. Clark 1975; Thepkanjana 1986; Lord 1993; Matthews 2006).

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## Complex predicates: Connecting crosslinguistic variation to acquisition

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Keywords: complex predicate, parameter, acquisition, crosslinguistic variation, argument structure

One reason people find it difficult to give a uniform characterization of complex predicates is that the characteristics vary so much from one language to another. Here I will assume that “complex predicate” is not in fact a primitive of UG. Rather, each language provides its own set of options for combining predicative expressions, and the particular options that are available result from the values of parameters whose effects extend beyond complex predicates – for example, parameters of case assignment – in concert with certain characteristics of the lexical inventory, such as the types of adpositions that a given language provides.

If so, the task of understanding the types of complex predicates that are available in different languages becomes a substantive and important project for comparative grammar (especially syntax, but also semantics, morphology, and phonology). Moreover, the relevant points of parametric variation (i) may be abstract in nature (not tied to specific surface forms), and (ii) may interact with one another in complex ways. Hence, the challenges for comparative grammar are considerable: in particular, it is highly unlikely we will find “minimal pairs” of languages differing in just a single parametric value.

My position will be that child language acquisition – especially the time course of acquisition – offers a powerful methodology for studying grammatical variation, with a set of strengths and weaknesses complementary to those of standard comparative grammar. Hypotheses about the parameters of variation can often be converted directly into strong, testable predictions about the way children will acquire one particular target language. Each individual child can then provide information comparable to an entire language in the comparative approach: an opportunity for two characteristics, which were thought to be linked, to diverge. Alternatively, if children consistently follow a specific, predicted time course of acquisition, then the findings can provide a strong new form of support for the hypothesis.

Here I will discuss some of the key findings from one of my central lines of research, which seeks to investigate argument structure – especially argument structures involving complex predicates – from the twin perspectives of comparative grammar and language acquisition. The structures of interest will include English V-DP-Particle constructions, Adjectival Resultatives, Goal PPs, *Put* Locatives, Perceptual Reports, *Make* Causatives, and Double Object Datives. The key questions for each of these will be (i) what information must be acquired, in order for the structure to become part of a child’s grammatical repertoire; and (ii) what types of input could plausibly provide that information to a learner.

## **Morpho-syntactic and prosodic cues in complex predicates: A Case Study**

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Keywords: Paraguayan Guarani, direct-inverse agreement, Complex Predicate, object and adverb incorporation, Accentual Phrase.

Our case study is based on Paraguayan Guarani (PG), a language with a productive complex predicate (CPred) system. For descriptive purposes, two types can be identified: **Type A** with an ‘incorporated’ inalienable Object (IObj) to the left of the head of the predicate, exemplified in (4)-(5)); **Type B**, with an ‘incorporated’ quality-denoting (*porã* ‘good’), a manner-denoting (*py’a* ‘fast’), or aspectual-

denoting (*meme* ‘frequently’) modifier, to the right of the head, exemplified in (3). The two types can combine into a still larger CPred, exemplified in (6).

This language has a direct/inverse inflectional system (governed by the person-hierarchy) (Zubizarreta & Pancheva 2017). PG does not make a categorial distinction between verbs and adjectives/adverbs, but it systematically identifies a predicate with a person feature (including predicative PPs) on its left-edge.

- (1) The presence of Per(son) features at the left edge of Category C identifies C as a **simple or complex predicate (call it P)**.

In the case of ‘incorporated’ IObj, the Per features at the left-edge corresponds to the external argument of the CPred in the direct order or to the Poss(essor) of the ‘incorporated’ IObj in the inverse order (via Poss-raising) (Zubizarreta & Pancheva 2017). Furthermore, P (simple or complex) can be merged with an Aspectual suffix (e.g. prospective *-ta*), and this in turn can be flanked by a discontinuous negation, consisting of a prefix *nd(o)* and a suffix *-i* (**call it P\***).

We have established that PG has an *Accentual Phrase* (AP), a small prosodic unit defined by the tonal melody, HLH\*, with the H\* tone realized on the last stressed syllable of the AP and a falling tone (HL) realized on the pre-tonic syllable(s). An AP is slightly larger than a word but contains only one Pitch Accent (Beckman & Pierrehumbert 1986, Jun 2014). We found that:

- (2) P (and its related P\*) typically constitutes one single AP.

However, the accentual phrasing of CPreds differs by its type. Type B systematically constitutes one AP; e.g. (3), whether or not *-ta* is present. V and all the material to its right must be part of the same AP. In type A, the CPreds can split into two APs. Yet, this is possible only when the prosodic parsing does not lead to a prosody/syntax mismatch, as in (5b), where the person features at the left edge of the CPred corresponds to the Poss of the incorporated IObj. Cf. (4b), where the reflexive’s syntactic scope is the CPred.

- |                                |                                     |                               |
|--------------------------------|-------------------------------------|-------------------------------|
| (3) a. (O-ñani mbegué-ta)      | b. (O-ñani) (mbegué-ta)             | [not attested]                |
| 3-run slow-Prosp               | ‘(S)he runs slowly.’                |                               |
| (4) a. (o-ñ-akã-ky’ó-ta)       | b. (o-ñ-akã) (ky’ó-ta)              | (direct order) [not attested] |
| 3-refl-head-dirt.remove-perf   | ‘(S)he will wash her/his head.’     |                               |
| (5) a. (ne-kasō sorō)          | b. (ne-kasō) (sorō)                 | (inverse order) [attested]    |
| 2s-pant tear                   | ‘You have torn pants.’              |                               |
| (6) a. (o-ñ-akã-kārāi porā-ta) | b. (o-ñ-akã-kārāi) (porā-ta)        | (direct) [not attested]       |
| 3-refl-head-comb well-perf     | ‘(S)he will comb her/himself well.’ |                               |

We conclude that the morphology is the most robust and consistent cue for identifying a verbal unit as a CPred; yet the prosody also provides an important cue, especially for Type B.

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## WORKSHOP 7

### Constructional analysis in multimodal perspective

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**Keywords:** multimodality, Construction Grammar, sound patterns, gesture, interdisciplinarity

Construction Grammar in its numerous variants, diverse points of emphasis, and expanding reach to other disciplines inside and outside of linguistics has become a robust analytic and methodological approach, with a wide acceptance within the broader domain of cognitively and functionally oriented linguistic scholarship. The acknowledgement by all variants of the theoretical and empirical significance of the construction, as a pairing of form and meaning that functions as the organizational unit of speakers' knowledge and grammar, forms the basis of a theoretical framework that has yielded a wealth of research on morpho-syntactic and discourse-pragmatic phenomena, and their integration in constructions, in many different languages.

The quest for a cognitively realistic and comprehensive analysis of speakers' knowledge motivates work focusing on the phonetic/prosodic features of constructions as well as on non-verbal elements including gestures, postures, facial expressions and eye gaze that may regularly accompany speech. In this panel, we take such a broad view of multimodality, that includes both sound and broadly-defined gesture, aiming to a) approach the issue from a truly interdisciplinary perspective, independently considering intrinsic regularities and constraints associated with sound/prosody and gesture as systems in their own right, b) extend existing work that investigates and attempts to integrate such information into the system of grammar, and c) promote meaningful discussion on the capabilities and limitations of Construction Grammar as a framework that can model and integrate the multimodal aspects of communication.

The interest of constructionists in sound patterns, including prosody and phonetic reductions, correlates with work on discourse markers and dialogic constructions both of which are prominently associated with prosodic cues. Comprehensive and realistic representations of spoken language in such studies have referred to the phonetic features associated with particular constructions in order to provide adequate analyses of the expressions at hand, differentiate them from other related constructions and inform decisions on polysemy, or embed them in broader constructional families defined on pragmatic *and* prosodic terms. For example, Pitch range variation, which has been found to express categorical differences in meaning cross-linguistically (e.g. Ladd 2008; Borràs-Comes, Vanrell, Prieto 2014; Ward 2019), is appealed to in constructional work which identifies stable correlations between sentence types and specific intonation contours (e.g. Lambrecht 1994; Michaelis & Lambrecht 1996), pragmatic functions and intonation contours (Marandin 2007; Ogden 2010; Ward 2019; Fischer & Niebuhr submitted), or particular constructions and prosodic regularities (Fried & Östman 2005; Terkourafi 2010; Fischer 2010; Nikiforidou et al. 2014; Fried & Machač 2019; Pons Bordería & Fischer to appear). Explicitly demonstrated in all above-mentioned work is the need for robust phonetic analyses and large-scale corpus data. At the same time, the preceding work has given rise to theoretically-challenging and still open questions concerning the representation of spoken language and the integration of phonetic information into construction grammar, the appropriate level of schematicity for including such a formal feature as prosody, and the independence (or not) of the prosodic modality vis-à-vis grammar.

While the preoccupation with co-speech gesture and its relation to grammar is more recent, it has given rise to a surprising amount of literature that challenges existing views of constructional analysis and genuinely tests its capabilities and limitations. Starting with pioneering work by Steen and Turner (2013), also Sweetser (2009), which includes important methodological suggestions and concerns, constructionists have looked at non-verbal features of communication, including gesture, eye-gaze, and facial expression. In principle compatible with the cognitive-linguistic agenda (Langacker 2008) and the inherently multimodal nature of communication, the incorporation of gestural information into grammar nevertheless raises serious theoretical and methodological questions with answers still pending (see the insightful discussion by Zima & Bergs (2017) and Ziem (2017); also Hoffmann (2017), Schoonjans (2017)). As pointed out by Feyaerts, Brône, & Oben (2017), multimodal research has revealed fairly entrenched associations of verbal and kinesic structures with conventionalized semantics, raising the possibility of considering them as multimodal constructions. Relevant work includes Zima (2014, 2017) on gestural correlates of motion and spatial distance constructions, Lanwer (2017) on appositional patterns, Mittelberg (2014, 2017) on German existential ‘there are’ constructions, and Pagán Cánovas & Valenzuela (2017) on time expressions. Approaching the issue from the side of gesture, studies like those by Turner (2017), Bresse & Müller (2017), and Jehoul, Brône & Feyaerts (2017) identify a broad range of verbal expressions all associated with a particular gesture or shrug. While all of this work has a solid empirical basis, at the same time it highlights the lack of appropriately annotated corpora as well as the inadequacy of common usage-based criteria, such as frequency, for identifying multimodal constructions. As acknowledged in all work cited above, the challenge of a *multimodal* construction grammar is still very real with several complex issues demanding answers.

Against this background, we expect contributions to address one or more of the following:

- Intrinsic differences among the different modalities and concomitant constraints, for example: nature of respective signs, functional/semantic space in the verbal, phonetic (prosodic as well as segmental), and gestural modalities, mapping of phonetic and gestural modalities onto the grammatical shape and/or functional status of specific patterns, conventionality in phonetic shape and gesture
- Identifying and finessing criteria for multimodal constructions: obligatoriness, frequency, salience, prototypicality, and perhaps yet other conditions
- Developing empirical methodology for multimodal constructions: corpora, experimental approaches, psycholinguistic input and methods
- Integrating non-verbal information into a comprehensive system of grammar: constructional modeling and representation, relevant features and attributes for phonetic and gestural information, preserving inheritance relations and constructional networks in multimodal constructional analysis
- Theoretical repercussions: capabilities and limitations of Construction Grammar.

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## **The Negative-Directive-Construction in Greek: Pragmatic and prosodic aspects of *de mu les?* ('tell me')**

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**Keywords:** negative directive, polar question, discourse marker, prosody, Modern Greek

The present study examines the pragmatic and prosodic aspects of the Greek negative directive *de mu les?* (NEG PN.1SG.GEN say.2SG.PRS) 'tell me' (lit. 'don't you tell me?'), bringing together conversation-analytic informed Interactional Linguistics and Construction Grammar. Data come from approximately 32 hours of audio-recorded informal conversations among friends and relatives (Corpus of Spoken Greek, and personal corpus collected in 2019-2020). The phonetic analysis of natural speech is performed via PRAAT (Boersma and Weenik 2019). In the first part of the analysis I demonstrate that in Greek conversation the negative interrogative *de mu les?* functions as a textual discourse marker that routinely occurs in turn-initial position, projects speaker's further talk and launches new conversational matters (such as topic talk), as shown in the following example:

- 1 A: **de mu les?** i erotisis pu kanis sta test moni su,  
'Tell me. The questions that you answer when you take the practice tests on your own,'
- 2 ine af- aftes [pu benune?]  
'are the ones included in the final test?'
- 3 B: [ine akrivos] i idjes.  
'They are exactly the same.'

The negative directive construction is delivered as a distinct prosodic phrase that is often compressed, with a rising intonation contour and a relatively prosodically unmarked negative marker. In the second part of the analysis, I compare the negative directive construction with the affective 'more questioning' *DE mu les?* 'Don't you tell me?' that conveys speaker's surprise or anger, is delivered with a rising intonation contour and a prosodically salient negative marker. I show that the two dialogic constructions share a similar prosodic contour normally associated with Greek polar interrogatives but they correlate with distinct prosodic properties, such as pitch prominence and speech

rate. The study enhances our understanding of the role of prosody in action ascription (Couper-Kuhlen and Selting 1996, and Selting 2010) and constructional meaning (Nikiforidou et al. 2014, Ogden 2010, and Terkourafi 2010). Some preliminary remarks are presented on how prosodic features can be intergraded in the formalization of a generalized *de mu les?* construction (Fried and Östman 2004, 2015).

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## The prosody of list constructions

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Keywords: construction grammar, italian, lists, prosody, spoken language

This paper explores the role of prosody in list constructions in spoken Italian, with a view of integrating suprasegmental traits in their formalization.

We build on previous constructionist work on lists (intended as the “syntagmatic concatenation of two or more units of the same type [...] that are on a par with each other, thus filling one and the same slot within the larger construction they are part of”, Masini et al. 2018:50), which managed to identify some properties typically associated with certain types of lists, however neglecting prosodic features. The latter are however particularly relevant, given the pervasiveness of lists in spoken language. The role of prosody in lists has been investigated before (e.g., Jefferson 1990, Selting 2007, Matalon 2017), although not specifically in a constructionist perspective.

Our goal is to determine whether prosodic features may be considered defining tools for the identification and interpretation of list constructions. The analysis will be conducted on two corpora of spoken Italian from radio and podcasts, namely LIR (Maraschio et al. 1997, Biffi & Setti 2008) and Radiocast-it (Masini et al. 2020). Radiophonic corpora are particularly fit for our purposes because (i) the audio quality is good enough to perform prosodic analyses; and (ii) the communicative situation emphasizes the role of prosody: since other multimodal variables (gestures, gaze, etc.) are neutralized, it becomes possible to ‘isolate’ relevant prosodic features.

A double-blind approach consisting in two steps is pursued (Savy & Voghera 2010). First, based on the sole transcriptions, a dataset of 100 lists with similar morpho-syntactic properties is collected from the corpora. Lists are selected that are made of 3+ nominal conjuncts, like (1)-(2), which potentially convey different functions. These lists are then annotated following the criteria in Masini et al. (2018).

- (1) *spesso quando io scherzo e dico odoravo di scuola o puzzavo di scuola quindi di [gessi]<sub>x</sub> [lavagne]<sub>y</sub> [cartelle]<sub>z</sub> già quando (.) sono nato [Radiocast-it, Il\_Cacciatore\_di\_Libri, Radio24, 02-05-2020]*  
 ‘often when I joke and say I already smelled of school or I stank of school so of [chalk]<sub>x</sub> [blackboards]<sub>y</sub> [schoolbags]<sub>z</sub> when (.) I was born’
- (2) *come oggi purtroppo si assiste anche molto spesso / in televisione all’uccisione di persone / [esecuzione]<sub>x</sub> / [violenze]<sub>y</sub> / [stupri]<sub>z</sub> / attraverso telegiornali eccetera / [LIR, Fahrenheit, Radio3, 15-03-2003]*  
 ‘like today regrettably one watches very often indeed / on television the killing of people / [executions]<sub>x</sub> / [violence]<sub>y</sub> / [rapes]<sub>z</sub> / in the news etcetera /’

Second, we analyze the prosodic traits of the collected lists, by considering parameters such as tonal parallelism or isotony (Wichmann 2000, Du Bois 2004, Inbar 2020), lengthening of the conjuncts (Inbar 2020), the iteration of tonal configuration, speech and articulation rate, pitch variation and loudness. We expect that prosody will fruitfully integrate our analysis, either showing a consistent pattern for all selected lists (whose structural variation is kept to a minimum within the dataset) or allowing to distinguish subsets of lists according to their different functions, thus speaking in favor of encoding prosodic information within the constructional representation of lists.

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## **Multimodal signs: PALM-UP as a textual discourse marker**

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Keywords: Israeli Sign Language, Discourse Markers, Construction Grammar, Signed Discourse

Discourse markers (DMs) in signed discourse are a highly challenging research domain. In the present study we focus on one of the most pervasive discourse markers in sign languages, PALM-UP, and shed new light on its functions in the context of monologic text production. We take a Construction Grammar approach to investigate the various structural contexts in which PALM-UP is used, and illustrate how the interpretation of this DM is constrained by the discourse construction (Östman, 2005) in which it is used.

Previous studies have suggested a range of idiosyncratic PALM-UP functions, discussing its relation to the illusive palm-up gesture (see Cooperrider, Abner & Goldin-Meadow, 2018). As these researchers show, the proposed functions range from gestural expressions of the signer’s uncertainty or emotional helplessness to highly grammatical functions of interrogativity and epistemic modality (see Engberg-Pedersen, 2020).

Here, we identify new major and consistent functions of PALM-UP as a DM by relying on the methodology of comparative discourse analysis, investigating its distinct roles in two text types (Fried & Östman, 2005; Nir, 2015) – personal experience narrative and expository discussion. Our analysis is based on the direct examination of the formational characteristics of the sign, including manual (related to the sign production and signing rhythm) and non-manual (face, head and body movements) features. We also examine the syntagmatic characteristics of the sign determined by lexical, grammatical and semantic properties of the accompanying signs in the affiliated utterance(s).

The within- and between-subject comparisons of the usage of PALM-UP tokens in our corpus [n = 15 ISL signers] reveal two functions, each intimately connected to the organization of the text as a whole in two distinct genres (see Berman & Nir-Sagiv, 2007). As narratives usually focus on people, their actions and motivations, PALM-UP tokens in ISL narratives appear at textual unit boundaries that coincide with the narrative schema (e.g., between episodes), and serves to express the narrator’s

personal stance or evaluation towards narrative events (Labov, 1972; Longacre, 1996), e.g., incredulity, certainty, amazement, etc. As such, depending on the specific evaluative stance, it is typically accompanied by highly expressive facial expressions and body movements.

In contrast to the narrative genre, the expository genre focuses on concepts and issues, and on their argumentative support (Britton, 1994; Mosenthal, 1985). The properties of the genre are reflected in the characteristics of PALM-UP as it is used in this topic-oriented type of discourse. In terms of its function, it supports the argumentative structure and contributes to topic continuity by accompanying reference to key discourse topics (e.g. *sign language, interpretation, deaf people*, etc.). In this context PALM-UP is typically accompanied by torso/head movements back, and by averted eye gaze patterns.

The contrastive analysis of PALM-UP as constrained by two text types thus demonstrates the positioning of this DM in the global discourse structure (cf. Fischer, 2010). Furthermore, its specific clustering with other multi-modal features illuminates its function as a textual discourse marker (Maschler & Schiffrin, 2015), impacted by both formational and broader discourse features.

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## **From boundaries to contours: A multimodal-construal approach to aspectuality**

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Keywords: multimodality, aspectuality, construction grammar, Czech, English

A prominent strand of the cognitively oriented gesture studies has focused on event structure encoding in speech and gesture, commencing with the pioneering study by McNeill and Levy (1982). The so-far analyses of English (Becker et al. 2011, Parril et al. 2013) showed that events encoded linguistically via *achievement* verbs (Vendler 1967) tend to be accompanied by singular gestures ended by an abrupt halt, whereas events encoded in the *progressive* co-occur with longer gestures with more complex movements. A similar pattern was observed in the movement parameters of telic vs. atelic signs of various languages (Malaia and Wilbur 2012).

A cross-linguistic study by Cienki and Iriskhanova (2018) focused on linguistic and gestural expression of a BOUNDARY schema (Müller 1998, cf. Janda 2003) revealing language-specific associations between *perfective* and *imperfective* aspects and *bounded* and *unbounded* gestures.

In our study, we abandon this dichotomic view – instead, we approach both verbal and gestural expression of event structure in terms of *aspectual contours* introduced in Croft's aspectual typology (2012), capturing changes of an event's qualitative state over time. In the fine-grained categorization built on Vendler's original system, the core feature of dynamic events is (*un*)*directedness*, i.e. implication of an inherent endpoint that may (not) unwind incrementally. Applied to gestural marking of aspectuality, this perspective allows for considering not only the gesture's ending but also the inner structure of the movement (see also Hinnell 2018).

*Random forests of conditional inference trees* (Tagliamonte and Baayen 2012) were used to analyse the dataset of more than 500 multimodal constructs from English and Czech multimodal corpora of interactional production. The analysis revealed language-specific clusters of semantic and gestural features determining particular aspectual contours. In English, distinct gesture forms are associated with the general *Aktionsart* categories of *achievements* (associated with a marked ending of gestures) and *activities* in the progressive form (associated with a lack of end-marking and by a complex gesture phrase structure). In Czech, the associations can be observed at a more fine-grained level, with a prominent role of *directedness* (the strongest predictor of gesture ending markedness) and *incrementality* features (the strongest predictor of gestural complexity), revealing cross-linguistic differences in gestural marking of aspectuality that a more coarse-grained perspective fails to capture.

As regards the specific role of manual modality in multimodal aspectual constructions, gestures typically boost the profiling operation (*profiling-for-highlighting*) and in some cases, they carry the critical information needed for discrimination between the competing construals (*profiling-for-discrimination*).

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An integrated approach to multimodal ironic constructions

Claudia Lehmann  
<not updated>

## **A multimodal approach to syntactic coordination in spontaneous conversation**

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Keywords: syntactic coordination, multimodality, spontaneous speech, Construction Grammar, Cognitive Grammar

As part of several multimodal studies on different types of syntactic coordinate constructions in British English, we propose a constructional framework to describe coordination in spontaneous conversation that includes the verbal, vocal, and gestural modalities. Although coordination has received substantial attention in different subfields of linguistics (e.g. De Vries 2005; Verstraete 2007; Haspelmath 2007),

its multimodal realization in real-life interaction still remains unexplored. This project focuses on the interplay of different semiotic resources, including prosody, hand gestures, head gestures, eyebrow movement, and eye gaze in coordinate structures.

Coordinate constructions have been described in Cognitive and Construction Grammars as a grammatical manifestation of the mental juxtaposition of co-equal structures (Langacker 2009), which cannot be characterized by semantic criteria alone (Haspelmath 2007). However, it is not clear whether and how the co-equal structures relate to one another (Acuña-Fariña 2006). Likewise, coordinate constructions are described as assemblies of symbolic structures that are all simultaneously available to participants (Langacker 2009). Yet, no description is made of multimodal assemblies as they temporally unfold in interaction, where information is not presented in isolation but in a contiguity relationship (Kok & Cienki 2016; Hirrel 2018). Coordination has also mostly been studied in elicited narrative speech (Asher & Vieu 2005). The use of coordinate structures across different spontaneous discourse activities has yet to be documented. We propose an analysis of coordinate constructions that includes a description of the way they combine together in a composite, multimodal message.

We focus on coordinate clauses linked by the morphological markers *and*, *but*, and *or*, produced in spontaneous conversation. The empirical basis for this study is an audiovisual two-hour dataset of ten unprepared dialogues. We test whether these three syntactic formats are evenly integrated to their environment, taking into account a range of variables in different modalities (syntax, discourse, prosody, co-verbal gestures) regarded as boundary cues. The number and nature of boundary cues (dependent variable) are expected to be different in function of each morphological marker introducing coordinate constructions (independent variable; three modalities: *and*-coordinates, *but*-coordinates, *or*-coordinates), and in function of discourse sequence type (independent variable; four modalities: narrative, argumentation, question-answer series, description). We use a series of Generalized Linear Mixed Models (fit by maximum likelihood) in R with the lme4 package (Bates et al. 2017) to account for the effect of each coordination mark on boundary cues.

Based on the results, we propose a schematic representation of the impact of coordinate constructions on interaction. This framework is based on the action of coordinate constructions on interpretative frames. We argue that coordinate constructions are practices in interaction that offer a dual representation of discourse. The different types of coordinate constructions refer to different interpretative frames in the participants' experience. The selection of these interpretative frames is expressed by the different amount of prosodic and gestural boundary cues produced in co-occurrence with each type of coordinate construction. This model contributes to the development of a cognitive-linguistic approach to multimodal and interactional features of language use.

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## **Utterance comprehension in spontaneous speech: phonetic reductions and syntactic context**

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Keywords: phonetic reductions, utterance comprehension, word-reduction rate, multimodality, Czech

The nature of spontaneous speech raises questions concerning the relationship between phonetic reductions and unimpaired comprehension of utterances, and existing research has proposed various motivations for the appearance of reduced forms (e.g. Lindblom 1990, Bybee & Scheibmann 1999, Raymond et al. 2006, Gahl et al. 2012, Bell et al. 2009). However, these studies focus primarily on production, only in a limited way on perception, and almost all the research has targeted just individual *words* or their parts, with the reductions based on a rather simplistic diagnostic of counting missing segments/syllables or measuring duration (cf. Ernestus & Smith 2018).

We propose to move beyond the meaning/function of individual words and frame our investigation by two broader theoretical questions: are there any detectable patterns in what and when gets reduced vis-à-vis syntactic organization, and might any reductions be properly part of conventional constructional inventory? As a starting point, we examine the dynamic character of reductions across complete *utterances* taken from spontaneously produced dialogs, thus considering both production and perception perspectives. And we use two different measures: *word-reduction rates* based on actual realization of *phonetic features*, expressed (in %) as a phonetic ‘distance’ from the citation form, and the degree of comprehensibility of individual words. This more complex approach should give us better insight into the interplay between reduced speech and syntactic organization of utterances (cf. Zwicky’s 1972 eloquent call for such a perspective, so far left unanswered).

An initial probe of Czech conversational data from the Czech National Corpus (*Ortofon*) and involving 80 respondents in our perception experiments reveals a very strong negative correlation between the identifiability of words (extracted from complete utterances, which are readily comprehensible as a whole) and the word-reduction rate. These data show a typical hearer to understand the entire utterance without difficulties but appears to identify only between 37–40% of its words when taken out of their sentential context. We work with the hypothesis that there will be detectable patterning in the interplay between reduction rates, syntactic organization, and various types of chunking (cf. the notion of “lexicalized reductions”, Ernestus 2014).

The results of our pilot experiment suggest that utterance comprehension might involve a combination of syntactic linearization (in Czech based on information structure encoding), semantic/functional predictability of words in particular positions due to syntactic bootstrapping (e.g. syntagmatic predictability based on complement structure), inherently salient phonetic features

independently of grammatical structure (e.g. the stability of sonority contrast), and perhaps also in relation to morpho-semantic structure. In this respect, the Czech material can contribute additional insights which existing research cannot address, being largely based on a few languages none of which involves complex morphology.

We will show that the findings raise a number of issues (at the lexical, phonetic, and syntactic layers) for constructional and frame-semantic representations of the multimodal interpretive tasks in spontaneous interaction, and suggest a possible (and preliminary) typology of syntactically motivated conventionalized ‘reduced chunks’, as documented in our data.

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## Multimodality, conventionality and inheritance in dialogic constructions

Kiki Nikiforidou

This paper investigates a family of dialogic constructions in Modern Greek with respect to multimodal correlates. The constructions are lexically anchored on the lexeme *ela* (come.Imperative.2<sup>nd</sup>singular) which, like English *come (on)*, can be used to challenge a preceding utterance. By itself or in combination with other elements (*tora* ‘now’, *de* ‘emphatic particle’, *more* ‘vocative particle

expressing familiarity’), *ela* is used as a sentence-initial, turn-initial, reactive, informal marker of challenge in dialogic constructions with distinct, non-compositional discourse-pragmatic functions; while simple *ela* generally challenges the speech act force of the preceding utterance, *ela tora* is restricted to challenging a complaint/accusation (e.g. (1)), *ela de* echoes a challenge already performed by the preceding question (e.g. (2)), and *ela more* specializes in dismissive challenge, whereby the speaker of the *ela more* turn downplays the content of the preceding utterance (e.g. (3)) :

- (1) *ela tora ki esi ... mu ksefije ...*  
 ‘Oh, come now, I didn’t mean it ...’ (GkWaC 92855)
- (2) - (Who can prove that mathematically?)
- *ela de pjos?*  
 ‘Who indeed?’ (GkWaC 93212)
- (3) *min to pernis elafra tu stil “ela more, peðiko ine”.*  
 ‘Don’t take it lightly, like “come on, it’s only for children”. (GkWaC 29529)

In addition to such distinct functions, earlier work (Nikiforidou et al. 2014) has identified distinctive prosodic contours for challenging *ela* that differentiate the challenging family from the motion and hortative uses. Along with other morpho-syntactic properties characterizing challenging *ela*, such prosodic features are shared by all *ela* patterns except *ela de* (where they are predictably blocked by the echoic function of *ela de* and hence the rising intonation associated with questions).

The present work attempts therefore to differentiate further the formal make-up of the challenging constructions in terms of gestural and face-expression correlates. In a large-scale recognition task, subjects were able to match *ela de* and *ela more* (but not *ela tora*) to the corresponding gestures (retrieved from google-collected verbal-cum-visual instances) to a significant degree. Such results are consistent with the following conclusions: a) non-verbal correlates may empirically substantiate constructional polysemy and the existence of distinct meanings and pragmatic functions, b) differences in performance may be attributed to the salience of the gestures involved in each pattern (as this salience is established on independent grounds – cf. Talmy 2017, Chu et al. 2014, Eisenstein et al. 2007); in the same line, the lack of clearly significant results for *ela tora* can be attributed to the broader conceptual/functional space (Croft 2001) associated with the accompanying expression, which makes harder the matching of the verbal to the non-verbal components, c) inheritance relations among constructions hold nicely when prosodic, but not gestural, features are incorporated in the description of these constructions. This last conclusion appears to have important consequences for the notion of ‘multimodal construction’ (Zima & Bergs 2017).

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## Exploring the interaction of gesture and prosody in a large corpus

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Keywords: co-speech gesture, prosody, corpus linguistics, air quotes, Construction Grammar

When Ellen DeGeneres says

- (1) I'm not "married", I'm married. (NewsScape 2015-01-15\_0000\_US\_KNBC\_The\_Ellen\_DeGeneres\_Show, 0:02:16-0:02:24; [click to view](#))

the first instance of *married* is accompanied by so-called "air quotes". The word's duration is twice as long as the second instance of *married*, which occurs with a palm-up open hand (PUOH) gesture.

Air quotes can also lead to a short pause before the highlighted word, as in the following example, which might be an epiphenomenon of the gesture requiring a more deliberate effort and exact timing:

- (2) I had gotten some some texts from Tim, Tim Allen, who plays Buzz Lightyear, the "astronaut". (NewsScape 2019-05-22\_2200\_US\_KNBC\_The\_Ellen\_DeGeneres\_Show 0:35:22-0:35:32, [click to view](#))

But even when the hands are in position and are used in parallel over a longer stretch, we observe the slowdown in the co-occurring speech:

- (3) And so I went to the "place where you get the beer from", and there were four ladies... (NewsScape 2019-05-21\_2200\_US\_KNBC\_The\_Ellen\_DeGeneres\_Show 0:27:38-0:27:48; [click to view](#))

Here, the speaker produces one instance of an air quote gesture stroke on every word. All words are monosyllabic and are stressed regardless of whether they are function words or not.

With these examples in mind, the first hypothesis of this paper is that the reduced speed might be attributed to an adaptation to the hearer because extra information is transmitted via the visual channel. My second, related hypothesis is that there seems to be less necessity of such a slowdown with congruent gestures, such as the gesture occurring with *chuck* in the following example:

- (4) ... whether or not, you know, you're gonna get chucked out of the meeting. (NewsScape 2016-06-26\_1500\_US\_CNN\_Reliable\_Sources 0:59:07-0:59:12, [click to view](#))

Thus while a large and deliberate gesture, even if it is congruent, still seems to be able to slow down the speech signal, as in the following example, such cases are relatively rare would expect the slowdown to be less substantial and less frequent.

- (5) ... and you were standing far away from this basketball hoop, and you chucked the basketball, and it - swish - it went in. (NewsScape 2016-09-28\_0635\_US\_KNBC\_Tonight\_Show\_with\_Jimmy\_Fallon 0:41:37-0:41:44, [click to view](#))

In this talk, I will analyse a larger sample of such gestures, discuss factors which might play a role based on the relevant literature (for the influence of social factors on the relation between speech and gesture, see Beattie/Aboudan 1994; for a perspective related to language acquisition, see Graziano/Gullberg 2018; for the relationship between speech rate and gesture, see Yoshida et al. 2002). A short exposition of the workflow will be included.

If these anecdotal results turn out to be generalizable, interesting question for constructionist models of language arise, such as the locus and theoretical status of the prosodic information and what might influence it (e.g. other processing demands or deliberate pauses aimed at keeping speech and co-speech gesture synchronic).

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## **Construction grammar, multimodal communication, and design features of language: Preliminaries to a coherent research program**

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**Keywords:** Construction grammar, multimodal communication, design features, conventionality, depiction

Questions of the type: “Is this a multimodal construction?”, “Is grammar multimodal?”, presuppose that we know what counts as evidence for possible answers. This presupposition turns out to be problematic, which reflects a more general issue (Schoonjans 2017, Zima & Bergs 2017), especially in a usage-based conception of Construction Grammar (CxG): usage is usually multimodal, so shouldn’t constructions often be multimodal? Splitting the questions into subquestions on design features (building on Sweetser 2009) provides a route to a resolution, such that justice is done to both the normality of multimodal communication, and special properties of the verbal dimension.

A fundamental property of symbolic (including linguistic) signs is that the link between form and meaning is conventional (therefore potentially arbitrary; Keller 1998, Tomasello 2008).

Conventional complex communication systems are clearly possible in the visual modality (cf. sign languages). But for gestures, the clearest cases of conventional signs look like words (often even like interjections, lacking combinatorial constraints), i.e. atomic substantive constructions, not complex schematic ones (“The X-er, the Y-er”, the English passive, etc.; cf. Croft & Cruse 2004, Verhagen 2009). Conversely, in the case of an image-based pattern like ‘Before-After’ (Schilperoord & Cohn, submitted), the issue is not schematicity, but precisely conventionality (vs. iconicity). For research into multimodal CxG, important specific questions are thus: “What aspects of gestures/images function as perceivable features of conventional complex schematic signs?” and “What gestures/images may conventionally fill open slots in constructions?” (i.e., apart from the universal possibility of mixing depiction and description in a single utterance; Clark 2006). For each question, when the answer is “None” (in a particular language or in general), an explanation is called for (cf. Sweetser 2009 on the relatively low degree of analyticity in co-speech gestures). The possibility (at least logically) of different answers to such questions, already demonstrates the usefulness of research questions addressing specific combinations of design features over general ones.

Another point is the relation between conventionality and frequency. Conventionality pertains to communities and entrenchment to individual speakers (Langacker 2008: 19), but the difference is not often elaborated, detrimentally so (Verhagen 2021). Conventions are regular patterns of behavior in a community, helping members to solve coordination problems recurrent in that community, not necessarily in the experience of individuals (Lewis 1969, Clark 1996). Frequency effects in a population and in an individual are causally related in complex ways, but not the same kind of thing.

Thirdly, the abstractness in complex schematic constructions (open slots) is dependent on the existence of a large, in principle unlimited, set of atomic elements (prototypically words) containing (overlapping) distributional classes (paradigms, syntactic categories; cf. Croft 2000). This is in turn predicated on the design feature “duality of patterning” (Hockett 1960): meaningful signs consist of conventional *combinations* of recurrent *meaningless* units (in speech: phonemes), a property that has developed early in the evolution of language (Jackendoff 2002, Verhagen 2021, lecture 7). Again: formulating research questions in terms of such properties (“distributional classes of visual features?”, “duality of patterning?”) helps avoiding possible vagueness and ambiguity.

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## WORKSHOP 8

### **Continuative and contrastive discourse relations across discourse domains: Cognitive and cross-linguistic approaches**

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Keywords: continuative discourse relations; contrastive discourse relations; discourse connectives; discourse genre; discourse processing

The goal of this workshop is to investigate the linguistic realization of continuative and contrastive discourse relations across discourse domains, considering in particular cognitive and cross-linguistic perspectives.

Discourse relations (also known as coherence relations or rhetorical relations) have been examined with regard to their signalling across various theoretical frameworks, such as Rhetorical Structure Theory (Mann & Thompson 1988) or Segmented Discourse Representation Theory (Asher & Lascarides 2003). Discourse relations may be signalled explicitly in order to ensure speaker-intended interpretation, or they may be left implicit (i.e. non-signalled) and therefore would need to be inferred by the reader/hearer from the discourse context (see Taboada 2009). The focus of previous research has been on the explicit signalling of discourse relations by means of discourse connectives and their discourse-relation-specific functions across numerous languages (see, e.g., Crible 2018; Das & Taboada 2018; Degand 2019; Gast 2019; Sanders & Noordman 2000). As regards the construal and negotiation of discourse coherence, discourse connectives can also be conceptualized as carriers of “discursive glue” (Fetzer 2018: 18-20), guiding language users in their inferencing processes to retrieve the relevant speaker-intended implicatures to connect the constitutive parts of discourse into a meaningful whole.

Building on the results obtained for the semantics and pragmatics of discourse connectives, this workshop focuses on two of the most cognitively salient kinds of discourse relations, i.e. continuative and contrastive discourse relations, which differ in their functions with regard to how they convey how the flow of discourse is to proceed locally (see also Fetzer 2018; Lewis 2017; Murray 1997). Continuative discourse relations (e.g. Continuation, Elaboration and Explanation) do not indicate a local halt in the flow of discourse or a local shift in perspective, but rather indicate that the ongoing discourse is proceeding as ‘planned’ in spite of additional elaborations or explanations on the current discourse topic. Upcoming discourse units are expected to be causally congruent with preceding discourse units, and they are expected to proceed in a temporally and logically ordered manner. Contrastive discourse relations indicate a local change as regards discourse topic continuity, and thus a local halt in the flow of discourse which requires a local sequential re-organization. Fully contrastive discourse relations require full local re-organization with respect to the discourse topic or some of its constitutive parts, while for contrastive elaborations – or concessive relations – only the non-congruent part(s) requires re-organization.

From a cognitive perspective, continuative and contrastive discourse relations have been shown to vary with regard to their production and interpretation. Given that language users by default expect upcoming discourse units to be temporally, logically and causally continuous with respect to the preceding discourse (see Murray 1997; Sanders 2005; Segal et al. 1991), continuative discourse

relations do not seem to require additional signalling and therefore would be expected to be easier to process than contrastive discourse relations. This is also reflected in the linguistic realization of these two types of discourse relations in that contrastive discourse relations are signalled more frequently by means of discourse connectives (e.g. *but* or *however* in English; *allerdings* or *jedoch* in German etc.) than continuative discourse relations, which in turn are more often conveyed implicitly (see, e.g., Asr & Demberg 2012; Hoek & Zufferey 2015; Zufferey & Gygax 2016).

The submissions to this workshop aim to answer the following research questions:

- How are continuative and/or contrastive discourse relations linguistically realized?
- To what extent do continuative and contrastive discourse relations differ with regard to their overt signalling (e.g. by means of discourse connectives)?
- Are there cross-linguistic and discourse-domain-specific differences with regard to the signalling of continuative and/or contrastive discourse relations?
- To what extent do continuative and contrastive discourse relations show differences with regard to their signalling in spoken and written discourse?
- How can the production and processing of continuative and contrastive discourse relations in context be accounted for?

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## **More than one Contrast. Crosslinguistic and intralinguistic comparison of Contrast marking through task- elicited speech**

Cecilia Maria Andorno, Sandra Benazzo & Christine Dimroth

In research on information structure and discourse cohesion, Continuity and Contrast have been defined in different ways (Repp 2010; Lee, Kiefer, and Krifka 2017; Asher and Lascarides 2003; Givón 1983) with respect to the pieces of information they refer to; the semantic relations established between information units; the illocutive force realized and goals achieved by speakers; the text types and discourse conditions involved.

As a whole, despite - or possibly because of - their vagueness, Continuity and Contrast proved to be useful heuristic tools to test and characterize cohesion phenomena in discourse. Crosslinguistic studies on elicited speech based on tasks (such as *the Finite Story*, *Spot the differences*, *the MapTask*) allowed to identify language-specific patterns differentiating discourse construction in different languages, when specific kinds of “contrast” or “continuity” were involved (Dimroth 2002; Dimroth et al. 2010; Benazzo et al. 2012; Turco, Dimroth, and Braun 2012; Turco, Braun, and Dimroth 2014; Benazzo and Andorno 2010). At the same time, studies in which inter-textual comparisons within the same language are involved show that differences in speakers' preferences within the same language arise depending on discourse types (Andorno and Crocco 2015; Turco, Dimroth, and Braun 2012; Fetzer 2018, Fetzer and Speyer 2012). Investigations disentangling the role of the above mentioned parameters in the way Continuity and Contrast are marked in discourse could therefore be useful, in order to fully grasp crosslinguistic differences, and to achieve more explicit and fine-grained characterizations of Continuity and Contrast relations in discourse.

In this paper we will focus on the notion of Contrast and the different ways it is understood in the literature when information management in different tasks is described. More specifically, we will compare data elicited in three languages (Italian, German and French) by means of different tasks, in order to relate intra- and inter-linguistic differences in the way Contrast is expressed with respect to variables such as the information units involved in the contrast relation (referents, time spans, polarity), the influence of discourse conditions (monologue vs. dialogue), speakers' access to the information to be expressed (mutual vs. non mutual), the status of information in the Common Ground (presupposed vs. asserted) and the speech acts involved. Analyses which take these variables into account yield new insights concerning language preferences in Contrast marking, and lay the ground

for drawing a semantic/pragmatic map of Contrast relations, against which language differences, as revealed by speakers' preferences, can be compared.

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Discourse markers as topic managers. But how exactly?

Amalia Canes-Nápoles  
<not updated>

**Contrastive discourse relations and non-canonical syntax.  
A case study of Left Dislocations in spoken and written Italian**

Doriana Cimmino

It is generally maintained that Left Dislocations (LDs) hold the discourse function of producing topical discontinuity in the text, as they are topic-marking devices signalling topic shifting (see Lambrecht 2001 for a cross-linguistic perspective; Berruto 1985, Benincà et al. 1988, Ferrari et al. 2008, for Italian). Less attention has been paid, at least in the literature on Italian (Brunetti 2009, Garassino/Jacob 2018), to the logical discontinuity LDs can produce, when they encode polarity focus readings, as in the made-up example in (1).

- 1) A: Non hai preso le pastiglie.  
B: *Le pastiglie, le ho prese!*  
'A: [Lit.] You didn't take the pills  
B: *The pills, I DID take them*'  
(ex. adapted from Garassino/Jacob 2018: 237)

Interestingly, from a corpus-based perspective, it has been observed that Italian LDs signalling topical and logical discontinuity differs in spoken and written language, at least in terms of frequency and realization. In written prose, LDs playing a contrastive discourse function are often associated with more explicit cues like contrastive connectives, as in example (2).

- 2) [...] non sarà facile risolvere in tempi brevi la questione [...]. *Ora però il presidente del consiglio una soluzione ce l'avrebbe a portata di mano.* (corriere.it, 22.11.2011)  
'It will not be easy to resolve the matter in a short time [...]. Now, *however, the prime minister, a solution, might have it at hand.*'  
(ex. adapted from Cimmino/Panunzi 2017: 168)

Pursuing this line of investigation, this contribution aims at further exploring the relation between contrastive relations and non-canonical syntax in spoken and written Italian. The data basis consists in 200 occurrences of LDs extracted from spoken and written corpora, namely of informal speech and online journalistic texts, providing a balanced variation between formal/informal and expository/argumentative texts. The methodological approach is based on an integrated framework, combining two discourse segmentation models for spoken (*Language into Act Theory*, Cresti 2000) and written (*Basel Model*, Ferrari 2014) Italian. The framework allows for the investigation of the interplay between syntactic features of LDS, their Topic/Comment information articulation on the utterance level, and their role in the semantico-pragmatic architecture of texts, namely the discourse functions LDs play in the linguistic context of occurrence.

Preliminary results show that neither syntactic nor information realization of LDs impact on the discourse function they play in the texts of occurrence. In other words, non-canonical syntax occurring in a given context might signal either topical discontinuity or logical discontinuity. This inherent ambiguity is resolved in the context through various linguistic and information strategies, as repetition of lexical material (Baranzini/Lombardi Vallauri 2015), overspecification of the contrastive relation through connectives or adjuncts signalling discontinuity, as well as positional or semantic adjacency (Fetzer 2018). Overall, spoken informal and argumentative texts are more likely to select information disambiguating strategies in association with positional adjacency, while written expository texts prefer lexical strategies and semantic adjacency.

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## **Connectives and other discourse signals: Parallelism in addition and contrast**

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**Keywords:** discourse connectives; discourse signals; self-paced reading; parallelism

When reading a text, readers mentally construct coherence relations between propositions such as addition, contrast or consequence. Such inferences can be facilitated by the use of explicit connectives, such as *and*, *but* or *so*, which function as processing instructions (e.g. Millis & Just 1994). However,

connectives are but one type of signals that help readers retrieve the intended coherence relation, along with a range of syntactic and semantic devices (Das & Taboada 2018). This paper investigates the interaction between connectives and other signals, focusing on parallel constructions in additive and contrastive relations.

It first presents the results of a corpus study in which connectives and non-connective signals were manually annotated (Crible in press). Frequencies for parallel constructions across relations are reported and show that they are highly specific to relations of contrast, as in *You cannot overdose with marijuana but you can overdose with alcohol*. This corpus-based finding diverges from most accounts of parallelism in sentence processing research, where it is considered as an additive construction generating expectations of similarity (Knoeferle 2014).

The paper then reports the results of three self-paced reading experiments in which the connective (*and*, *but*), the relation (additive, contrastive) and the structure (parallel or not) were manipulated (Crible & Pickering 2020). All experiments followed a 2\*2 Latin square design and used 40 pre-tested stimuli per condition. Participants (120 for each experiment) were recruited on Prolific, and only saw one version of each trial.

In Experiment 1, all critical trials were pairs of clauses connected by *and*, half of them expressed a relation of contrast, the other half expressed a relation of similarity. In Experiment 2, all critical trials expressed a relation of contrast, half of them were connected by *and*, the other half by *but*. For all experiments, half of all trials used a parallel structure across the connected clauses, while the structures differed in the other half. In these first two experiments, parallelism had a significant facilitating effect across the board, with faster reading times. However no effect of connective nor of relation was found, which can be partly explained by the passive reading task that did not force the participants to actively process the coherence relation. To address this issue, Experiment 3 included explicit disambiguation questions after each trial. With this new task, a significant interaction was found between connective and parallelism, which showed that parallelism is particularly useful when the connective (*and*) is ambiguous. This pattern of results suggests that, during active processing, readers are sensitive to different discourse signals but that the processing of contrast remains shallow unless disambiguation is explicitly required. These findings shed more light on the multiple sources of information and their interaction in discourse processing and should be extended to other coherence relations and other signals.

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## Continuity in discourse: A case study on causal and contrastive relations

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Keywords: discourse structure, discourse relations, discourse marking, continuity, Rhetorical Structure Theory

Discourse (or coherence) relations are considered to be continuous (e.g., Continuation, Elaboration) or discontinuous (e.g., Contrast, Comparison), based on preserving or shifting deictic centres, e.g., spatio-temporal setting, topicalised referents, or perspective (Segal et al. 1991, Murray 1997). However, even though (dis)continuity is often mentioned as a crucial property of discourse relations, the exact boundary between continuous and discontinuous relations is not clear.

We see two major reasons for this: First, relations often shift some deictic centres while continuing others: For instance, even Contrast allows for referential continuity, and Evaluation shifts perspective but maintains topicalised referents (Fetzer 2018). This raises the question of how such shifts or their continuations contribute to an overall classification of relations as (dis)continuous.

What is more, for some phenomena it is unclear whether they introduce continuity or discontinuity. In particular, temporal progression in narration is cited as indicative of discontinuity because it involves temporal shift (Asr and Demberg 2012), and as indicative of continuity, being part of the expected flow of events (Zufferey and Gygax 2016).

Consequently, we first define continuity in terms of deictic shifts and their interaction. The definition is based on Givón's (1993) dimensions of textual coherence (TIME, SPACE, REFERENCE, ACTION, PERSPECTIVE, MODALITY and SPEECH ACT), which characterise aspects of continuity. It also integrates results from psycholinguistic research on discourse processing (e.g., Rapp and Taylor 2004), and is operationalised in terms of identifiable features (e.g., for perspective: external, protagonist's or writer's).

Then we investigate these shifts on English data, viz., coherence relations in the RST Discourse Treebank (Carlson et al. 2002), focusing on causal and contrastive relations, which are generally considered continuous (Asr and Demberg 2012) and discontinuous (Fetzer 2018), respectively. Our preliminary results show that dimensions that often involve a shift are TIME, REFERENCE, PERSPECTIVE, MODALITY and ACTION, whereas shifts for SPACE and SPEECH ACT are extremely rare. Causal relations, albeit deemed continuous, are found to display more discontinuity than contrastive relations for TIME (21% vs. 11%) and REFERENCE (75% vs. 73%). Contrastive relations emerge as more discontinuous than causal relations for PERSPECTIVE (32% vs. 18%) and MODALITY (30% vs. 21%). Intra-group variations also exist: Within the causal group, Cause is found to be more continuous than Consequence for REFERENCE (40% vs. 10%), or within the contrastive group, Antithesis shows more discontinuity than Concession for PERSPECTIVE (52% vs. 11%).

These results suggest that (dis)continuity in coherence relations operates more as a multifaceted phenomenon than a categorical one. A relation can simultaneously show evidence for continuity only for a certain set of dimensions but not necessarily for others. Also, because relations show different degrees of (dis)continuity (both across and within groups), the notion of (dis)continuity might more aptly be treated as a gradient phenomenon than as a bipolar one. Furthermore, relevance of specific dimensions seems to vary depending on the text types. In particular, spatial or action shifts are found to be more infrequent in our newspaper texts, but we expect them to play a central role in other genres such as narrative.

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## **The linguistic realization of *Continuation and Elaboration* in (English) discourse: A context-based analysis across narrative and argumentative genres**

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Keywords: continuative discourse relation, discourse connective, discourse coherence, keystroke logs, production format

Discourse relations (DRs) are of key importance for the structuring of discourse and the construal of discourse coherence. Continuative DRs indicate that upcoming discourse units are intended to contribute to the overall discourse topic with respect to temporal, logical and causal congruity, albeit on different levels (see Egg and Redeker 2010; Murray 1997; Sanders 2005). As regards their linguistic realization, DRs may be encoded in coherence strands and signalled with connectives, pragmatic word order and other metadiscursive devices (see Fetzer 2018; Hofmockel, Fetzer and Maier 2017).

This paper examines the linguistic realization of continuative DRs in British English written discourse comparing two sets of data and two sets of production formats: (1) narrative and argumentative discourse, and (2) single-authored texts (9 argumentative texts (4,826 words); 10 narrative texts (5,551 words)) and dyadically edited texts (9 argumentative texts (1,838 words), 9 narrative texts (1,864 words)). The co-constructed data stem from experimental editing-based tasks; they are supplemented with keystroke logs and other metadata from the dyads' negotiations of the edited texts' well-formedness.

The focus of analysis lies on the linguistic realization of the coordinating DR *Continuation* which keeps the discourse on the same level, and on the linguistic realization of the subordinating DR *Elaboration* which introduces a deeper level in the discourse hierarchy, paying particular attention to contexts in which the DRs are encoded in coherence strands, and to contexts in which they are additionally signalled.

From a more global perspective, genre seems to have an impact on the signalling of continuative DRs with 26.4% signalled *Continuations* and 76.9% signalled *Elaborations* in the argumentative data. This may be because *Continuation* is a strong genre expectation: it contributes to furthering the argumentation and thus does not need to be signalled, as seems to be the case with subordinating *Elaboration* encoding less important information for the argumentative goal. In the narrative data, 52.2% *Continuations* and 71.66% *Elaborations* are signalled. The high number of signalled *Continuations* – and an even higher number of signalled *Narrations* – is due to overlapping defining conditions and particularized features of the latter. That is why *Continuation* and *Narration* are generally not left underspecified in narrative data. Genre may thus be assigned the status of some blueprint coding a speech community's typical ways of linguistically realizing genre. However, it is not only genre-as-such, which constrains the linguistic realization of DRs, but also production format. As for the dyadically edited data, the signalling of the continuative DRs is distributed in a more similar manner in the argumentative (57.1% *Continuations*; 57.8% *Elaborations*) and narrative (58.2% *Continuations*; 46.7% *Elaborations*) data.

The quantitative results are refined with a qualitative micro-analysis of the metadata. It shows that the signalling of *Continuation* and *Elaboration* tends to be made manifest at an early stage in the editing process in the narrative data, requiring only little revision and negotiation among the participants. In the argumentative data, these DRs tend to be signalled only at a later stage in the editing process, generally after a more lengthy negotiation of well-formedness.

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## Initial vs. Medial Placement of Contrastive Linking Adverbials in Conceptually-Written Present-Day English

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Keywords: contrastive discourse connectives; contrastive discourse relations; information structure; placement patterns; written academic English

One way to explicitly signal contrastive discourse relations is by means of ‘discourse connectives’ – or ‘linking adverbials’ – such as *however*, *by contrast*, or *on the other hand*, whose main function it is to link discourse segments of various sizes, thereby contributing to discourse cohesion. One characteristic that sets linking adverbials apart from other sentence constituents is their great positional flexibility; in unmarked declarative sentences, many of them can be placed in initial (1), medial (2a–c), or end position (3) without affecting the grammaticality of the sentence, as illustrated in the following:

- (1) **However**, marriage is no longer the chief defining basis of coupledness. (*RL\_1999/1*)
- (2a) In Africa, **on the other hand**, racism is likely to end first, following the liberation of Southern Africa. (*RL\_1979/2*)
- (2b) Gloucester, **by contrast**, kept the king’s full confidence. (*BNC\_EEE 343, W:ac:humanities\_arts*)
- (2c) She suggests, **however**, that the process has not been symmetrical. (*RL\_1978/4*)
- (3) We know a few things, **however**. (*RL\_2014/4*)

Corpus studies have shown that both the choice of item as well as the specific placement patterns are highly register-specific: In CONVERSATION, linking adverbials almost exclusively occur in initial position while they are also found at higher frequencies in medial position in ACADEMIC PROSE, particularly the item *however* (cf. Biber et al. 1999: 891, Table 10.18; see also Liu 2008 or Dupont 2018).

In my talk, I will provide in-depth quantitative and qualitative analyses of positionally-flexible contrastive linking adverbials, focusing on their function(s) in initial as opposed to medial position. The linking adverbials chosen for investigation are *however*, *by contrast*, *in contrast*, *on the contrary*, and *on the other hand*. Drawing on data from the academic section of both the *BNC* and the *COCA* as well as from the *Reith Lectures* of the *BBC*, it will be demonstrated that in initial position, contrastive linking adverbials act as signposts to make the contrastive discourse relation between discourse units maximally salient. In medial position(s), on the other hand, they not only establish a contrastive link between parts of discourse but additionally function as focus markers – focus understood in the sense of ‘focus of attention’: Depending on their specific medial position, contrastive linking adverbials are used to draw attention not to the contrastive discourse relation itself, as they do in initial position, but to particular elements within the discourse unit, thereby facilitating the processing of information by highlighting information-structural constructs such as contrastive topics, topic changes, and/or new information (for first suggestions, see, e.g., Greenbaum 1969 or, more recently, Lenker 2014 and Dupont 2018).

It will further be shown that the latter function is mostly restricted to written language where it is not possible to draw on prosodic devices for emphatic reasons: PRAAT-analyses of the sound files of the *Reith Lectures* have shown that there is a correlation between prosodic structure and position,

indicating that the placement of contrastive linking adverbials in medial position may compensate for the fact that, in written English, prosodic means such as pitch accents are not available for signaling contrast.

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## **The role of prosody in expressing subjective and objective causality in Mandarin discourse**

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Keywords: Causal relations, discourse, subjectivity, prosody, Mandarin

Causality is a fundamental concept in language and cognition. There are (at least) two types of causality. One type concerns the cause-consequence relationship between factual events (see sentence (1)), hence often called “objective causality”. In contrast, the other type involves evaluations, inferences, and opinions of a thinking subject (see sentence (2)), hence called “subjective causality” (Sanders, Spooren, & Noordman, 1992).

(1) Heidi won first prize at the art festival so she was thrilled.

(2) Heidi won first prize at the art festival so she must be talented.

In some languages, the types of causality are frequently specified using specialized causal connectives. For example, in Mandarin, objective causality is often expressed by *yushi* ‘so’, whereas subjective causality is usually expressed by *kejian* ‘so’ (Li, Evers-Vermeul, & Sanders, 2013). In English, however, the two types of causality are often left underspecified, because of the use of a general causal connective, e.g. *so*, as in (1) and (2) (Sweetser, 1990). Although subjective and objective causality in English are indistinguishable by the connective being used, these two types of causality demonstrate clear differences in prosody: subjective causality is produced with a higher f<sub>0</sub> maximum,

lower f0 minimum, longer duration, and distinctive contour shapes, compared to objective causality (Authors, submitted). This evidence indicates that prosody plays an active role in expressing subjective and objective causality in the absence of specialized causal connectives. The question then arises whether prosody would still play a role when specialized causal connectives are in use. The current study explores this question by examining the prosodic realizations of forward subjective and objective causality in Mandarin, which are expressed by *kejian* and *yushi* respectively. The hypothesis is that prosody would be used to a lesser extent because the two types of causality are already marked by specialized connectives.

A production experiment was conducted to elicit speech samples containing the two types of causality, using the dialogue task designed by Hu et al. (submitted). In the task, the participants conversed with an experimenter about hypothetical people and events presented on PowerPoint slides. Their speech was analyzed in terms of pitch, duration, and speech rate. The effect of subjectivity on these prosodic measurements was evaluated with Bayes factors. Preliminary results showed that there was no strong evidence for the effect of subjectivity on the acoustic measurements tested, meaning that Mandarin subjective and objective causality expressed by specialized causal connectives did not differ in terms of pitch, duration, and speech rate, consistent with the hypothesis. This result indicates that prosody plays little role in expressing subjective and objective causality when lexical markers are present, in contrast to the active role prosody plays when the two types of causality are lexically underspecified, as in English. Considered together, the findings of the current study and the findings reported in Hu et al. (submitted) provide initial evidence for a trade-off relationship between lexical and prosodic means in expressing different types of causality, in line with the Functional Hypothesis (Haan, 2001).

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## **When discursive glue comes off: Japanese contrastive and continuative connectives in spoken discourse**

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Keywords: connectives, attitudinal (in)compatibility, utterance-final position, opposition, causality

This study compares two Japanese connectives *demo* 'but' and *dakara* 'so,' morphologically independent markers representing contrastive and continuative relations, respectively. Like

connectives in other languages, they occur utterance-initially (at left periphery): *demo* indicates **incompatibility** or opposition between two units of discourse, while *dakara* signals **compatibility** or causality. However, when these connectives occur utterance-finally (at right periphery), they sometimes express the speaker's attitude considered tantamount to the reversal of those respective relations.

The utterance-final *demo* 'but' in (1) follows an expression of affiliation or empathy. The speaker emphasizes his/her **alliance** (attitudinal **compatibility**) with the addressee by echoing the addressee's utterance ("umai-naa"). In this context, utterance-initial *demo* is awkward as in (1'), because it denotes opposition between the two utterances. This affiliative use is partly motivated by the speaker's consideration of current interactional needs, which is paraphrased as: 'You might think you need no more information BUT I want to say this.'

(1) JM017: *Iyaa, umai-naa-tte.*

'Wow, (I think his guitar performance is) great.'

JM018: *Umai-naa, hontoni umai-naa, demo.*

'(It is) great, really great, DEMO.' (BTSJ 009-01)

(1') JM018: #*Demo, umai-naa, hontoni umai-naa,*.

Likewise, the utterance-final *dakara* 'so' in (2) no longer indicates a causal relation as expressed in utterance-initial position but conveys the speaker's irritation or annoyance (attitudinal **incompatibility**) with the addressee, paraphrased as 'I've told you already!' (also note the affiliative use of *demo* in the first utterance).

(2) JF03: *Kawaii, demo. Biizu, kore?*

'(It's) cute, DEMO. (Are they) beads, these ones?'

JF04: *Soo. Watasi kore, mae-mo, kore haite-ta-nda-yo, dakara.*

'Yes. I wore these (sandals) before, too, DAKARA.' (BTSJ 012-01)

This disaffiliative use also derives from the speaker's recognition of current interactional needs, but this time it is driven by an inevitable force that makes him/her say more: 'I think I need to say no more but you don't seem to understand this, SO I have to say this.' Utterances with final *dakara* are typically produced in response to the addressee's question/comment about what the speaker has already explained, as in (2).

Our investigation of a part of the Japanese spoken corpus ("conversations between friends" in BTSJ, Usami 2020) finds 48 tokens of utterance-final *demo* and three tokens of utterance-final *dakara* (cf. 421 and 200 tokens of utterance-initial *demo* and *dakara*, respectively). It reveals that these new attitudinal meanings are observed for about half of the final *demo* tokens and all the three tokens of final *dakara*. We argue that those meanings emerge from the speaker's recognition of interactional needs such as his/her desire or obligation to say more. These speech-act uses (Sweetser 1990) are likely to arise when the connectives detach from their regular, utterance-initial position. Once connectives are liberated from the unmarked position, their "discursive glue" (Fetzer 2018) comes off and they can develop new discourse-pragmatic meanings that would not be reduced to any kinds of their logical meanings. Such weakening of "discursive glue" may also be responsible for new discourse-pragmatic meanings of "final partible *but*" in Australian and other varieties of English (Mulder & Thompson 2008).

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## Genre-based expectations for coherence relations

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Keywords: coherence relations, connective insertion, expectations, genre, sentence continuation

Previous research has shown that readers create expectations about coherence relations in a text, which facilitates the processing of expected relations (e.g. Mak & Sanders, 2013). Such expectations can be elicited by lexical cues (e.g. connectives) and are maintained across larger discourse spans (Scholman et al., 2017). However, it is unknown to what extent other contextual cues also influence readers' expectations about coherence relations. One such cue may be the genre of the text in which the relation is embedded. Such information about the type of text has been shown to influence discourse processing (Zwaan, 1994) as well as how coherence relations are interpreted (Sanders, 1997). The present research compares readers' expectations for coherence relations in narrative and encyclopedic texts, to examine the influence of genre on expectations about such relations. Causally related events play a key role in narratives (Bal, 1997) while entries in encyclopedias are often a collection of facts related in an additive way. Thus, readers were hypothesized to have stronger expectations for causal relations in narrative texts and for additive relations in encyclopedic texts. Several experimental methods were used to compare expectations for causal and additive relations in encyclopedic and narrative texts.

In the first study, we collected readers' expectations for the type of coherence relations in Dutch encyclopedic and narrative texts in a continuation task. Results showed that continuations were related to the prompt in an additive way more often if the context resembled an entry in an encyclopedia. Narrative texts, on the other hand, yielded relatively more causal continuations. This suggests that the knowledge that readers have about the genre of a text influences their expectations about discourse coherence. In a second study, we investigated whether such genre-based expectations also affect how Dutch readers interpret discourse relations. The interpretation of causal and additive relations in encyclopedic and narrative texts was examined using a connective insertion task (cf. Scholman & Demberg, 2017). This revealed that the intended relation, especially if it was causal, was still inferred correctly, regardless of genre. Contrary to what was hypothesized, additive relations were more often interpreted as being causal in the encyclopedic genre. This could be due to the fact that determining

the intended relation in encyclopedic texts requires background knowledge, which some readers might lack. In this case, readers might resort to a causality-by-default strategy (Sanders, 2005).

The presented studies provide more insight into the role of context in predictive processing. However, to examine the nature of the effects found in the first study, it is key to look at how the information about the genre of the text influences the online processing of coherence relations. Therefore, we also present the results of an eye-tracking experiment, which is currently being conducted to examine if genre has a facilitating effect on the processing of genre-consistent expected relations.

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## **Digression, topic resumption and discourse coherence: Comparing English and Spanish**

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Keywords: discourse coherence, digression, topic resumption, English, Spanish

Digression is a discourse function that is identifiable and distinct from other similar functional strategies, and different languages differ in how they mark this function. This study is an English-Spanish contrastive analysis of the way speakers manage the movements and transitions occurring between one discourse topic unit and another, in what can be called ‘speech paragraphs’ or episodes (cf. Chafe 1994, Redeker 2006, and Wichmann 2000). The specific focus here is on the discourse contexts of digression and topic resumption, that is, the interruptions or asides occurring inside these topical units, by which the main segment topic is temporarily suspended before it is resumed again.

The literature on discourse coherence in general and on digression in particular has, thus far, largely focused on discourse markers (in the sense of Schiffrin 1987), sometimes diachronically (cf. e.g. Estellés 2009, Pons & Estellés 2009, Redeker 2006, and Traugott 2020a, 2020b). The present study takes a less common approach by exploring a selection of recurrent expressions (words and

more often ‘lexical bundles’, cf. Biber & Conrad 1999) in English and Spanish that have proved to play an important role in signalling discourse coherence relations in the environment of digression and topic resumption. By contrast to discourse markers (e.g. *now, so, by the way*), the examined expressions (‘topic-formulating devices’; cf. Downing *et al.* 1998, and Heritage & Watson 1979) have an explicit reference to the topic and signal to the interlocutor that a new direction with respect to topic is proposed. These expressions have proved to work as important cognitive devices for topic continuity (cf. Givón 1983) and discontinuity, in the environment of digressions.

The data is extracted from the EuroParl corpus (Koehn 2005; cf. <http://www.statmt.org/europarl/>) using the corpus management tool Sketch Engine (cf. <https://www.sketchengine.eu/>). As an illustration of these devices, see the following examples in English (a) and Spanish (b) from this corpus:

- (1) a. <s> I digress. </s>  
b. <s> Se trata de un inciso. </s>
- (2) a. <s> Going back to the (...) </s>  
b. <s> Volviendo a los (...) </s>
- (3) a. <s> Could I just say as an aside that (...) </s>  
b. <s> Permítaseme decir simplemente, como acotación al margen, que (...) </s>

The research goals underlying the present study are the following: (a) identify the more common topic-formulating devices in the contexts of digression and topic resumption in English and Spanish, and their recurrent translational counterparts in the other respective language; (b) study their frequency and distribution, and discern which of the two, or rather three, contexts (i.e. beginnings and ends of digressions) is more highly marked; and (c) explore their use in connection to several aspects of the digression involved, such as the length of the digression or aside.

It is hoped that the insights deriving from this analysis will contribute to the study of continuative and contrastive discourse relations as well as to a theory of global discourse coherence (cf. Lenk 1998).

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Explicit and implicit relations of continuity and contrast in a multilingual discourse bank

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<not updated>

## Processing causal and counter-argumentative connected discourse

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Keywords: causality, counter-argumentation, communicative competence, processing, eyetracking

The *Cognitive Principles of Discourse Marking* (Loureda et al. 2021) predict that connectives, as procedural expressions, guide inferences in communication. They constrain processing effort leading interlocutors towards optimal contextual selection according to their instructions. These principles, formulated on the basis of empirical evidence, apply regardless of the argumentative relation (causality or counter-argumentation) or the grammaticalization degree of the connective (e.g., *por ello* ‘that is why’ vs. *por tanto* ‘therefore’; or a *pesar de ello* ‘despite that’ vs. *sin embargo* ‘however’). Differences in terms of the cognitive effects of discourse marking in causality and counter-argumentation deploy rather at more specific levels:

1. The particular constraining effect of counter-argumentative and causal connectives. Counter-argumentative connectives reduce global processing effort, while causal connectives impact processing on a local level (Loureda et al. 2021). This helps explain speakers’ preferences for implicit connection in continuous relations (e.g., causality), also recoverable without an instructional mark, as opposed to non-continuous relations like counter-argumentation, often overtly signaled (Asr/Demberg, Murray 1995, Hoek/Zufferey 2015, Sanders 2005, Zufferey 2016, Fetzer 2018).
2. The processing patterns of L1 and L2 speakers, and L2 speakers with different degrees of communicative competence in Spanish (L2-C1 vs. L2-B1). L1 speakers and L2-C1 speakers show more developed inferential skills to optimally process utterances; by contrast, less competent speakers (L2-B1) depend more on conventional connection marks and show a greater impact of the type of argumentative relation (Recio Fernández 2020, Loureda et al. 2021).

Based on data from untimed reading eye-tracking experiments for Spanish, this communication provides empirical evidence of these effects framed into the *Cognitive Principles of Discourse Marking*.

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## Discourse relations and the German prefield

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In the model of the prefield-ranking (s. author sometime a), several types of elements with certain information structural properties are possible as prefield fillers. Four classes of elements were identified that are ranked as follows: scene-setting elements; phrasal discourse relation markers (PDRM) > contrastive elements > aboutness-topics (meeting certain additional criteria). The place in the ranking indicates the likelihood that said element, if it is present in a clause, will occupy the prefield. PDRMs such as e.g. *dann* (marking Narration; discourse relations following Asher & Lascarides 2003) are ranked high, similar to scene-setting elements (s. e.g. authors sometime b).

If PDRMs are relevant for the filling of the prefield, it could be the case that discourse relations as such influence the prefield ranking in the sense that some discourse relations favor one kind of ranking, while others favor another ranking. This paper is devoted to the investigation of this hypothesis by means of a corpus study on modern German vs. Early New High German (ENHG), using texts of different genres. The genres were chosen as representing 4 parameter pairings, narrative vs. argumentative genres and genres with high personal involvement vs. such with low involvement. As examples for discourse relations, Narration, Continuation, Contrast, Comment, Elaboration and Explanation were chosen, being the most common ones.

It can be shown that discourse relation influence the prefield ranking, while the effects of genre in itself is negligible. The high position of PDRMs in the ranking holds for all investigated discourse relations. Narration and Explanation show the ranking in the form mentioned above, with Elaboration and Continuation, topics are ranked higher than contrastive elements. Visible differences in genre are an epiphenomenon of the fact that different genres show different percentages of discourse relations. A narrative text with high personal involvement (e.g. autobiography) shows the ranking outlined in the first paragraph, as it is composed mostly of clauses in the Narration relation, while in argumentative texts (pleas, radio lectures), topics play a higher role, ranked higher than contrastive elements and even challenging the high rank of scene-setting elements, as a consequence of the fact that these text types have a higher rate of Elaboration, Explanation and Contrast relations. The differences are equally present in the modern German and the ENHG text sample. This shows that the modern ranking, in dependence of discourse relations, was already in operation in ENHG.

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## How do Learners process Continuous and Discontinuous Relations?

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Keywords: discontinuous and continuous relations, second language, language processing, discourse connectives

Reading and understanding a text in L2 can be a cognitively demanding task. While the impact of discourse connectives and alternative signals is rather well documented for L1 speakers, the literature about the reading processing of connectives of language learners is yet relatively sparse. Among the few studies that assessed the processing of discourse relations in L2, the recent findings by Zufferey and Gygax (2017) and Recio Fernández (2020) demonstrate that even highly proficient L2 readers fail to detect incoherencies during online reading when they have to process implicit discontinuous relations (e.g., concessive and confirmation relations), as predicted by the *continuity principle* (Segal et al., 1991; Murray, 1995, 1997) as well as the *causality-by-default* assumption (Sanders, 2005). However, results from these experiments also raise intriguing questions that we address in a new set of experiments.

First, we do not know yet at which proficiency level learners acquire a native-like ability to process continuous and discontinuous discourse relations. Second, learners' ability to process continuous and discontinuous relations might depend on the frequency and register of the connective that conveys it. It can be assumed that connectives which are not common in speech might represent, especially for untrained speakers and readers, an added complexity to text processing. Since working memory is used for the encoding these unusual elements, less proficient L2 learners should not be able to detect a loss of coherence within the already demanding discontinuous relations. Finally, previous experiments showed no evidence for an interaction effect between the type of relation (causal or concessive) and the nature of the link (explicit or implicit). In other words, there is no evidence that for example a discontinuous relation is processed more slowly by non-native speakers when the link is implicit compared to a continuous relation.

In a set of three experiments, we will assess the way German-speaking learners of French process relations by means of a self-paced-reading-task, by comparing coherent and incoherent relations (Experiment 1), explicit and implicit relations (Experiment 2) and relations that are conveyed by a frequent or an infrequent connective (Experiment 3). Whereas both Zufferey and Gygax (2017) as well as Recio Fernández (2020) tested highly frequent connectives in French and Spanish, we focus in Experiment 3 on infrequent connectives that are bound to the written mode. By doing so, we gain further insight into the impact of the connectives' characteristics on online text processing in L2. We will further assess the participants' language proficiency using the French version of the Lextale-task (Brysbaert, 2013) which showed in previous experiments high correlations with an offline sentence-completion-task with discourse connectives, as well as with a grammar task (Zufferey & Gygax, 2020). We will also link L2 learners' ability to process French connectives to their degree of exposure to print in their native language, as this factor was found to be relevant in offline tasks with native (Zufferey & Gygax, 2020) and non-native speakers (Wetzel, Zufferey & Gygax, 2020).

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<b>WORKSHOP 9</b>
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## **Dissecting Morphological Theory 1: Diminutivization Across Languages and Frameworks**

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Keywords: morphological theory, diminutives, form-meaning mismatches, affix (re)analysis, end/beginning of word

This workshop is planned as the first of a series of workshops that challenge morphological theory with data from diminutivization and addresses three basic issues of diminutive morphology: A. Demarcation, B. Status in grammar, and C. Theoretical description.

Diminutive(-related) meanings and forms have received much attention in the literature (overview in Grandi & Körtvelyessy 2015) and some authors have claimed that we cannot account for peculiarities of diminutives with the regular mechanisms of grammar but need an additional component: *evaluative morphology* (Scalise 1986), *morphopragmatics* (Dressler & Merlini Barbaresi 1994). Do we? Or is everything a matter of method (Jurafsky 1996)?

### **A. Demarcation**

Diminutives and hypocoristics often use the same formal means, express affection and are considered overlapping categories (Doleschal & Thornton 2000). For theoretical purposes, do we need to differentiate between them and is a sharp distinction possible? The following list contains properties of hypocoristics that *do not* seem characteristic of diminutives:

#### **1. Phonology**

*Phonological word* and *phonological templates* play an important role in hypocoristic formation (Prosodic Morphology in Lappe 2007); hypocoristics involve *shortening of form*: stressed syllables tend to be preserved, unstressed syllables tend to be deleted; hypocoristic affixes select *monosyllabic bases*.

#### **2. Morphology**

Hypocoristics (and all types of shortening/clipping) are hard to analyze in terms of morphemes and exhibit variation (*Thomas - Tom(my)*).

#### **3. Semantics**

Hypocoristics are not (necessarily) related to smallness. The base and the derivative in hypocoristic formations have the same referential meaning and differ only in terms of pragmatic function (Alber & Arndt-Lappe 2012).

#### **4. Pragmatics**

Hypocoristics serve for calling and in languages such as Russian where the phenomenon affects all proper nouns in informal style (i.e. seems obligatory) hypocoristics have even been labelled Vocative case by some scholars (discussion in Manova 2011).

## B. Status in grammar

Diminutives are considered an in-between category, i.e. between derivation and inflection (Scalise 1986, Dressler 1989). But does this tell us something significant about diminutives? In Distributed Morphology (DM, Halle & Marantz 1993, and Bobaljik 2017) both derivational and inflectional affixes can serve as heads; in Paradigm Function Morphology (PFM, Stump 2001) inflection and derivation are both paradigm-based (Bonami & Strnadová 2019). For the morphological parser (C3 below), diminutive suffixes are inseparable from the inflection that follows them. Based on the literature (*relevance*, Bybee 1985; *scope*, Rice 2000; *closing suffix*, Aronoff & Fuhrhop 2002): Is a positional control (internal/external affix; distance from the root; word-final) more useful than derivation/inflection for research on diminutives?

## C. Theoretical description

### 1. Types of bases

DM assumes that all morphological derivations start from the  $\sqrt{\text{root}}$ ; PFM recognizes only *stems* as bases; still other theories postulate a parallel existence of roots, stems and words as bases (Natural Morphology, Dressler et al. 1987). There are two types of stems: (i) *uncategorized (morphemes*, Aronoff 1994), they are in use in a-morphous morphology (PFM) (in the main-stream DM only  $\sqrt{\text{roots}}$  can be uncategorized); (ii) *categorized*: stems in DM are of this type but affixes that derive them are either heads or modifiers, the latter do not categorize or change the category or grammatical features of the base (Steriopolo 2009 in relation to diminutives).

### 2. Form-meaning mismatches

DM and PFM treat form and meaning separately: roughly, we first produce what we want to say in terms of semantics (combination of abstract morphemes (syntactic terminal nodes) in DM versus ready-made sets of morphosyntactic properties associated with paradigm cells in PFM); having produced the semantic word, we look for form to express it (DM *late insertion*). Such architecture does not have space for form-meaning mismatches, at least not at the level of the morpheme (Manova et al. 2020). Thus, how do form-meaning mismatches associated with pieces of structure smaller than words arise? One way in which mismatches arise is via *diachronic reanalysis/semantic bleaching*, by which diminutive suffixes lose their diminutive meaning, e.g. the Bugarian *barče* ‘café’, originally a diminutive from *bar* ‘bar, discoteque’, has lost its diminutive meaning in some contexts; *barče* in (1) is larger than *bar*:

- (1) *bar-če*                    *sās*    *sobstven* *bar*  
café [bar-DIM] with its own bar

Diminutive suffixes in Slavic can be stacked/queued (2), Manova (2015). See also De Belder et al. (2014) on “high” and “low” diminutive affixes.

- (2) *bar* ‘bar, discotheque’ → *bar-če* ‘small bar & café’ →  
→ *bar-č-ence* ‘very small bar & small café’ →  
→ *bar-č-enc-ence* ‘very very small bar & very small café’

With the reanalysis of *bar-če* as ‘café’, the diminutive suffix moves one position away from the root, nothing gets lost but a new non-diminutive suffix was born. *Bar-če* still has diminutive connotation meanings: (i) part of a furniture set used for drinks; (ii) small piece of furniture. And *-če* is

also a non-diminutive derivational suffix: *dimitr-ov-če* ‘chrysanthemum’ (flower that blooms around St. Dimitar’s day).

### 3. Affix (re)analysis

Derivatives relate to other derivatives through their bases and through their affixes, which results in priming effects in psycholinguistics. Lázaro et al. (2016) researched suffix priming on lexical decision of suffixed (ero-JORNAL-ERO ‘laborer’) and pseudosuffixed (ero-CORD:ERO ‘lamb’; *cord* is not the root of *cordero*) Spanish words, as well as the effect of orthographic priming on nonsuffixed words (eba-PRUEBA ‘test’). For suffixed and pseudosuffixed words, related primes significantly accelerated response latencies in comparison to unrelated primes (ista-JORNALERO; ura-CORDERO); for simple words, there was no facilitation effect of the orthographically related prime (eba-PRUEBA) in comparison to the unrelated prime (afo-PRUEBA). In other words, since *-če* is a word-final (frequent) derivational suffix in Bulgarian (C2), for morphological processing it is favorable if a derived Bulgarian word terminates in *-če*. Contra Parsability Hypothesis (Hay 2002)/Complexity-Based Ordering (Plag & Baayen 2009), morphological parser appears semantically blind (Beyersmann et al. 2016; but affix position matters, Crepaldi et al. 2016), and all word-final *-če* suffixes are the same suffix for it. All this indirectly supports reanalysis of morphological form and suffix homophony word-finally. Unsurprisingly, the semantically-blind positional logic of the morphological parser serves for affix discovery in Unsupervised Learning of Morphology (Hammarström & Borin 2011).

Is diminutive affix reanalysis wide-spread cross-linguistically? Is it always related to word-final/beginning position? Do (productive) diminutive affixes, in this process, always distance from the root?

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## **Diminutive formation in Spanish: evidence for word morphology**

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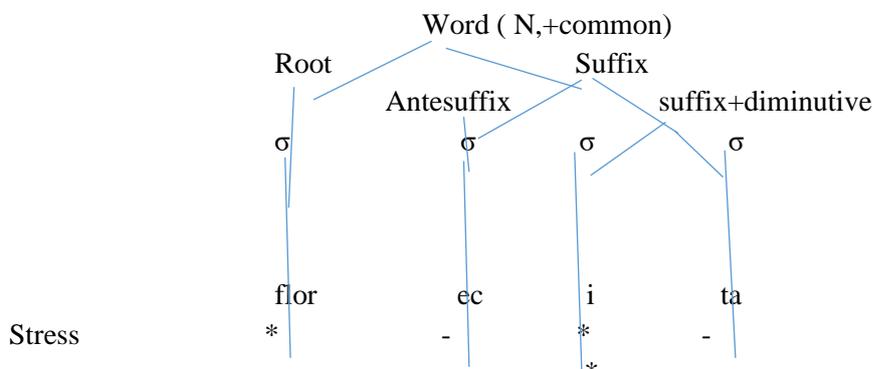
Keywords: Spanish, diminutives, derivation, word morphology

Spanish descriptive morphology has missed a very interesting alternance exhibited by monosyllabic nouns. Some Spanish common nouns are also used as proper nouns, or personal names, but when they are monosyllabic, its diminutive formation diverges. The following list illustrates this fact:

Common noun	Diminutive	- common noun	diminutive /hypocoristic
mar 'sea' (fem)	marecita	Mar (fem)	Marita *Marecita
paz 'peace' (fem)	pacecita	Paz (fem)	Pacita *Pacecita
flor 'flower' (fem)	florecita	Flor (fem)	Florita * Florecita
luz 'light' (fem)	lucecita	Luz (fem)	Lucita * Lucecita
cruz 'cross' (fem)	crucecita	Cruz (fem, -fem)	Crucita *Crucecita
fe 'faith' ( fem)	*****	Fe ( fem)	Fecita * Fececita

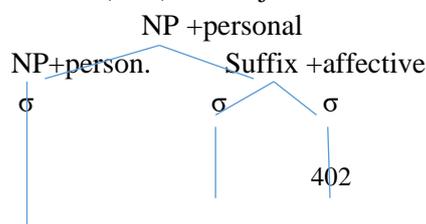
Diminutive formation in Spanish employs several affixes, the most frequent are the suffixes *-ito/a* & *-illo/a*. Thus from disyllabic common nouns *papel* 'paper', *pared* ' wall', *anis* 'anisetete', diminutive is formed affixing *-ito/a*: *papelito*, *paredita*, *anisito*...With monosyllabic common nouns, It is necessary to add the antesuffix *-ec-*, as illustrated on the above list, on the left column. What is striking is the fact that when these nouns become proper nouns, or personal names, they do not take the antesuffix, on the above list on the right column. In the latter case, the common noun becomes actually a hypocoristic, i.e. a familiar form of address. In fact, the suffix *-it-* with proper nouns does not function as a diminutive suffix, i.e. it does not modify the word to mean a lesser degree of it. It expresses affection. Therefore, it seems to remain out of grammar according to Dressler (1994). Further, personal names have some other properties that separate them from common nouns: they have reference but not sense as well as other morphological peculiarities like absence of determiners that make them a category of the type NP different from common nouns, which have the word category N. Further, the list above proves that the presence of the antesuffix *-ec-* is affected by the phonological structure and the category N of the word ( Wurzel 1984). The antesuffix *-ec-* is needed to satisfy the Trochaic Constraint (TC) by which monosyllabic common nouns prefer trochaic rhythm matching this pattern such as it appears on tree (1):

(1)



Monosyllabic personal names (NPs) both reject antesuffix *-ec-* and TC :

(2)



Flor I ta  
Stress \*

Therefore monosyllabic common nouns are words of category N that satisfy word properties, while monosyllabic personal names are of category NP.

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## Acquisition of diminutives in typologically different languages: Evidence from Russian and Estonian

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Keywords: derivation, child speech, child-directed speech, word-formation, first language acquisition

While diminutive-rich languages have been described concerning some facets of their acquisition (e.g. Savickienė, Dressler 2007), little attention has been paid to languages which have only a restricted number of diminutives and their suffixes. Therefore the comparison of Russian and Estonian not only as two typologically different languages, but also as good examples of different diminutive systems: diminutive-rich vs. diminutive-poor, would provide interesting data on the acquisition of this language subsystem. Since typological features of languages are acquired by children early (Slobin 2006), we suppose that diminutive systems in the languages under investigation will be acquired differently.

Our comparative investigation considers diminutives at the early stages of development based on the longitudinal data from typically-developing monolingual children (2 per language). Recordings of spontaneous dialogues of children and their caregivers form 60 hours database for children aged 1;3-3;0. The main goals and research questions for this usage-based study are to examine: a) how different diminutive systems affect the acquisition of diminutives and derivation in general; b) how early diminutive patterns develop during the course of acquisition and what role does productivity play in the acquisition of diminutives: different derivational patterns and suffixes have different productivity in both languages and diminutive suffixes can also shift a stem to the more regular and transparent inflectional pattern; c) how can input–output relations be described in the acquisition of diminutives? and d) which other factors are important for the acquisition of diminutives.

In both languages diminutives are one of the early derivational categories in child speech. Being a powerful trigger for the development of early derivation and morphology, diminutives are prominent at the beginning in Estonian as the only derivation category, whereas they develop constantly alongside other derivatives in Russian. The proportion of diminutives among nouns and nominal derivatives is higher in Russian, in which it mostly increases during the course of development as opposed to Estonian, where their frequency decreases. The different diminutive systems do not much affect the emergence of first diminutives but did affect the number of diminutives among nouns and the general number of diminutives used by the children.

The role of productivity can be detected both in word-formation (diminutives are the first members within word-formation pairs and families) and inflection (first diminutives belong to regular inflectional types and they were used productively from the very beginning).

In both languages the children have slightly more diminutives than caregivers but still no clear impact of input on output was found in terms of positive correlation (cf. Haman 2003).

Thus, the acquisition of diminutives in the two languages is different: the poorer system of diminutives in Estonian emerges slightly earlier than in the much richer system of Russian. Among the factors influencing the acquisition of diminutives, input frequency seems not to have a high importance, while their productivity and transparency can be considered to have much greater influence on the acquisition of diminutives and derivation in general.

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Diminution, categorization and declension class in Serbo-Croatian

Boban Arsenijevic & Marko Simonovic

<not updated>

## Typological impact of morphological richness and priority of pragmatics over semantics in Italian, Arabic, German, and English diminutives

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Keywords: typological impact, morphological richness, pragmatics, diminutives, (quasi-) hypocoristics

This paper examines the impact of the typological property of morphological richness (acquisitional evidence in Xanthos et al. 2011) on diminutive formation in Italian, Austrian German, English and Tunisian Arabic and the priority of pragmatics over semantics of diminutives (Dressler & Merlini Barbaresi 1994, 2001, and Merlini Barbaresi & Dressler 2020), in these languages. Whereas the semantic meaning of diminutives relates to smallness of the diminutive noun (Jurafsky 1996), pragmatic meaning (including mitigation, endearment, sympathy, empathy, irony and sarcasm) has the whole speech act as its scope (psycholinguistic processing evidence in Wittenberg & Trotzke, in press, dialectological German evidence in Elmentaler 2013). We focus on compositional diminutives, in which the diminutive pattern adds only a transparent pragmatic or semantic meaning (cf. De Belder et al. 2014). Secondly also hypocoristics are dealt with, plus the generally ignored intermediate

category of quasi-hypocoristics (e.g. German *Vat+i* ‘daddy’), which refer to one specific person, like names.

Arabic diminutive formation is only root-based, English only word-based, whereas German is both, as well as Italian (but only exceptionally word-based, as in *gufo+ino+ino+ino* ‘owl+DIM+DIM+DIM’).

We hypothesize that morphological richness of languages has the following impacts on: 1. high type and token frequencies of diminutives: highest in Italian and Arabic, lower in German, lowest in English; 2. number of productive diminutive patterns (9 Italian suffixes plus interfixes, 5 Arabic internal schemata plus 2 suffixes, 4 German suffixes plus umlaut, 3 English suffixes); 3. number of different patterns applying to the same base (if pragmatic, no pattern or lexical blocking), e.g. Italian *vipp-ino/etto/uccio/ar-ello* (cf. Dressler et al. 2020); 4. combinations of diminutive suffixes (cf. Manova 2011): most in Italian (Merlini Barbaresi 2012), less in German, none in English; repetition of the same suffix only occurs in Italian. Both are inherently impossible for Arabic internal schemas, but the suffix *-ūn* may increase the semantic effect, as in *ṣiġīr*, DIM *ṣġayyir* ‘tiny’, *ṣġayyr+ūn* ‘very tiny’; 5. Italian is the freest language in attributing to diminutives both the head and the non-head property of changing (or not) gender, and of transforming (or not) adjectives into nouns, whereas German maintains gender (as in hypocoristics and quasi-hypocoristics) and adjectivehood only in speech directed to very young children or pet animals. Adjectives remain adjectives in Arabic but turn into nouns in English. This is compatible with Dressler’s (1989) scalar approach from inflection to derivation, also supported by German exceptional position of plural before diminutive suffix in *Kind+er+chen* (less exceptional earlier on: Edelhoff 2016).

The data analysed are from Viennese German, Southern Tunisian (Bedouin) Arabic (a decade of fieldwork by Ritt-Benmimoun and her team, cf. Ritt-Benmimoun 2014, 2018), the Tuscan variety of Italian and British English, mostly stemming from our 31 previous publications on diminutives/hypocoristics. Our focus in this paper is on diminutives in asymmetric communication with pet animals, first thoroughly examined in Mattiello et al. (2020, based on 90 interviews), but here examined from a typological viewpoint.

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## Borrowed or inspired? Komi diminutive under Russian influence

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Komi has a diminutive suffix *-ik/* used with adjectives and adverbs: /it̪æt/ ‘little, small’ → /it̪æc̪ik/ ‘tiny’, /regid/ ‘for a short time’ → /reg̪ij̪ik/ ‘id.’. Palatalization (untypical for Komi) occurs before the suffix *-ik/*. A similar form, *-(i)nik/* is also used in a similar function: /lok/ ‘bad’ → /lok̪in̪ik/ ‘baddish’; /musa/ ‘kind, dear’ → /mus̪q̪in̪ik/ ‘dearie’; /nedir/ ‘for a short time’ → /nedir̪in̪ik/ ‘id.’. (The examples are from Beznosikova et al. (2000) and texts.)

In, Russian, both *-ik/* and *-n̪ik/* are used with nouns: /dom/ ‘house’ → /dom̪ik/ ‘cottage, hut, small house’ etc. Although *-n̪ik/* (similarly to *-ik/*) is used in a broad sense for coining new lexemes, it is not used as a diminutive suffix. Otherwise, diminutive adjectives, adverbs and quantifiers (such as /xud-/ ‘slim, thin’ → /xud̪en̪k-/ ‘id. endearing’; /s̪tab-/ ‘weak’ → /s̪tab̪en̪k-/ ‘id. endearing’;

/nʲemnogo/ ‘some, not much’ → /nʲemnozko/ ‘a bit’ etc.) are general in Russian.

According to Beznosikova et al. (2000), Komi has borrowed a high number of words ending in /-nʲik/ from Russian, but these are never adjectives (but nouns); and predominantly, they cannot be interpreted as diminutives.

In Komi, there are no formal differences between nouns and adjectives, and both are unsuffixed in their base forms. Nouns can not only be the heads of noun phrases, but can also be used as modifiers: /tʲeeri/ ‘fish’ can be used as a modifier: /tʲeeri vəj/ ‘fish oil’. This kind of structure usually corresponds to adjective + noun phrases in Russian (/ribʲij zir/ ‘id.’). On the contrary, in Russian, nouns, adjectives and adverbs are quite strictly distinguished morphologically: e.g. adjectives are always suffixed with a (non-zero) inflectional morpheme. Therefore, adjective-forming suffixes can never stand at the end of the word form.

I will argue that

- Russian influence generated a need for diminutive adjectives in Komi;
- Russian diminutive adjectival suffixes were inaccessible for Komi grammar;
- Komi adopted an accessible suffix /-ik/ with a similar function (intimacy and endearment) from Russian nouns to form diminutive adjectives etc.;
- Komi also adopted the regularity that /-ik/ must be preceded by a “soft” consonant;
- for adjectives ending in a vowel, Komi adopted another suffix, which is similar (and historically related) to /-ik/, i.e. /-nʲik/ (-/ɲik/);
- /-ɲik/ also occurs after stems ending in consonants in the form /-ɲɪk/.

The situation in Komi contradicts the classical view of Paul (1888: 346) that words and not suffixes are borrowed, and suffixes are just reanalyzed from the loanwords.

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## Verbal diminutives and cross-categorial syncretism

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Keywords: Diminutives, unergatives, argument structure alternations, morphology, syntax

In many languages, apparently **cross-categorial** “diminutive”/”attenuative” morphemes can be used to derive both nouns and verbs, cf. (1)-(2).

- |     |    |  |     |    |                               |
|-----|----|--|-----|----|-------------------------------|
| (1) | a. | <i>Das Wasser koch-t / köch-el-t.</i>  | (2) | a. | <i>Bund Bünd-el</i> (German)  |
|     |    | the water boil-3SG.PR/ boil-DIM-3SG.PR |     |    | bunch(MASC.) bunch-DIM(NEUT.) |
|     |    | ‘The water boils / simmers.’           |     |    | ‘bunch’ ‘bundle’              |
|     | b. | <i>fischi-ett-are</i>                  |     | b. | <i>fischi-o</i>               |
|     |    | whistle-DIM-INF                        |     |    | <i>fischi-ett-o</i> (Italian) |
|     |    |  |     |    | whistle-DIM-S.M               |

‘to whistle, to emit short whistles’  
 ‘whistle’(action) ‘whistle’ (object)

c.	<i>cixkek</i>	c.	( $\sqrt{cxk}$ )	<i>cixkuk</i>	(Hebrew)
	giggle.DIM.V		laugh	giggle.DIM.N	
	‘to giggle’		‘a giggle’		

We argue that the diminutive suffix in both cases is **nominal** (hence: categorizing), based primarily on data from Austro-Bavarian/Viennese German. Austro-Bavarian diminutive verbs in *-el-* productively form (optionally) expletive verbs of emission, (3). They are unergative activity verbs, even when the apparent base verb is not, as in (4), where the base verb is a causative alternation achievement verb.

(3) *Es herbst-el-t*

It Fall-DIM-3SG.PR

‘It’s a bit Fall-like’.

(4) a. *Das Wasser koch-t.* a’. *Das Wasser köch-el-t.*  
 the water boil-s the water boil-DIM-3SG.PR  
 ‘The water is boiling.’ ‘The water is simmering.’

b. *Der Hans koch-t das Wasser.* b’. \**Der Hans köch-el-t das Wasser.*  
 the Hans boil-s the water the Hans boil-DIM-3SG.PR the water  
 ‘Hans is boiling the water.’ \*‘Hans is simmering the water.’

We argue that **both** in nouns and in verbs, the diminutive affix spells out the head of a diminutive *nP* that selects nouns or roots (cf. Wiltschko & Steriopo 2007). The function of  $n_{DIM}$  is individuation; the creation of (countable) units (Wiltschko 2006, De Belder 2011, De Belder et al. 2014). Embedded under *v*, this “unit-of” interpretation results in an activity verb. The verbalizing head  $v_{ACT}$  ( $\approx v_{DO}$ ) classifies the event as action and may introduce an **actor** theta-role, which is then saturated by a DP introduced by a higher Voice head. Since actors (unlike agents) can be animate or inanimate, we thus derive the properties of both the expletive/unergative “verbs of emission” such as *herbst-el-n* ‘be Fall-like’ and the seemingly “deverbal” diminutives such as *köch-el-n* ‘to simmer’. In other words, iterative *Aktionsart* in the verbal domain is (at least sometimes) equivalent to “diminutive” semantics (unit, individuation) in the nominal domain.

Our analysis explains why verbal diminutives pattern as unergative activity verbs, independent of the valency and *Aktionsart* of corresponding non-diminutive verbs from the same root: Their derivational basis is always a nominal,  $n_{DIM}$ . This also corroborates the idea that the structure of denominal verbs directly reflects the structure of their nominal basis (Harley 1999, 2005), and that the external argument of diminutive verbs is not selected by the root (as argued by Hale & Keyser 1993, 2002 for unergatives in general).

Finally, this analysis implies that a “cross-categorial syncretism” as in ex. (1)-(2) always reflects an identical underlying structure. This explains the cross-linguistically observable uniformity of diminutive morphology across categories (N, V, Adj.) and morphological devices (affixation, reduplication).

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## The parallel between diminutives, hypocoristics and embellished clippings in English and Dutch

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Keywords: prosodic morphology, trochee, diminutives, hypocoristics, clipping,

This paper shows that one cannot draw a sharp dividing line between morphology and phonology. This becomes especially clear when formation of diminutives, hypocoristics and embellished clippings are investigated. Data come from English and Dutch.

‘By comparison with other languages English has rather limited morphological means for creating diminutives’ (Dixon 2014 : 171). However, there is one productive English diminutive suffix: *-y*, *-ey*, *-ie*, *-ee* and *-sy* (Dixon 2014: 173), which can also be used for hypocoristics.

(1) diminutives	(2) hypocoristics
doggy < dog	Andy < Andrew
piggy < pig	Debbie < Deborah

The diminutives in (1) can also be used as endearment terms.

The base word for diminutives formed with this suffix must be monosyllabic. Hypocoristics must first be truncated to monosyllabic forms before suffixation. The same applies to embellished clippings.

(3) embellished clipping with an attested independent clipped form	(4) embellished clipping without an attested clipped form
sissy < sister (sis)	granny < grandmother (*gran)
ciggy < cigarette (cig)	(n)uncie/nunky < uncle (*unc)

The data under (3) may be explained as a special case of (1). Examples such as *sissy* and *ciggy* can be described as normal diminutives with an endearment reading. For the examples in (4) such an explanation is excluded. Just as in (1) and (2) the examples in (3) and (4) are all trochaic.

The word formation pattern used here even goes one step further and leads to pseudo-embellished clippings: full forms suffixed with the same suffix *-ie* /*-y*. To be clear: pseudo-embellished clippings are not clipped forms.

(5) pseudo-embellished clippings

blokie < bloke  
foody < food

The data in (5) share an informal register and an endearment reading. Moreover only monosyllabic nouns and adjectives can form the basis for pseudo-embellished clippings. The resulting form is always a trochee.

Diminutives are much more frequent and productive in Dutch. The standard suffix is *-je* and four allomorphs (Booij 1995: 69-73, Kooij and Van Oostendorp 2003: 165-172, Booij 2019<sup>3</sup>: 184-185). However, there also exists a suffix *-ie* that occurs in several dialects (De Schutter a.o 2005: 45-60). This suffix also appears in informal registers and can be used in hypocoristics. The Dutch pattern is similar to the English one.

(6) informal, substandard diminutives	(7) hypocoristics
briefie < brief ‘letter’	Ali < Adelheid
vissie < vis ‘fish’	Japie < Jacob

(8) embellished clippings

jochie < jongen	‘boy’	(joch)
makkie < gemakkelijk	‘something which can easily be done’	(*mak)

(9) pseudo-embellished clippings

jonkie < jong	‘young person’
slimpie < slim	‘smart person’

In contrast to English, there are hardly any embellished forms in Dutch, the clipped base of which also occurs independently.

Again, only monosyllabic forms can form the basis of this process of suffixation. The trochaic character of the resulting lexeme is another well-formedness condition.

Analysis of the data presented here indicates that the syllabic structure of the base word and the stress pattern of the final form determine this process of word formation. This means that one cannot draw a sharp line between morphology and phonology.

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## Diminutivization in Lithuanian: The case of noun borrowing

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Keywords: diminutive, diminutive formation, borrowed stem, suffix, affix pleonasm

Diminutives differ from other categories that they do not result from a process of derivation but from a process of modification, in which word class is retained and just the meaning is modified (cf. Schneider 2013, 137 f.; Urbutis <sup>2</sup>2009, 199 f.). The same suffix can carry both a diminutive (a) and a pejorative or meliorative (b) meaning, thus, context plays a crucial role in specifying the meaning of a suffix, e.g. *-uk-*: a) *simpātiškas automobili-ūk-as* (masc.) ‘a nice little car’ ← *automobil-is* ‘car’ vs. b) *suklēręs autobusi-ūk-as* (masc.) ‘a clapped-out minibus’ ← *autobūs-as* ‘bus’. Most of suffixal diminutive derivatives make pairs of masculine and feminine gender.

Diminutives with indigenous suffixes and borrowed stems are quite numerous in Lithuanian. However, not all indigenous suffixes are used to derive diminutives from borrowed stems. It seems that some constraints exist that do not allow the formation of diminutives with certain indigenous suffixes. The major aim of this study is to explain suffixation constraints and to discuss the productivity of indigenous suffixes used to derive diminutives with borrowed stems. A synchronic approach to diminutive formation based on *The Corpus of the Contemporary Lithuanian Language* is applied in the research.

Our preliminary results show that the productivity of the diminutive suffixes attached to borrowed stems corresponds to the productivity of these suffixes in Standard Lithuanian. Allomorphic suffixes *-el-* / *-ėl-* together with *-uk-* seem to be the most productive in hybrid diminutives, as in diminutive formation in Standard Lithuanian (see Stundžia 2016, 3095; Urbutis <sup>4</sup>2006, 88-90). Most diminutive suffixes, which are of low productivity or non-productive in Standard language, are also non-productive in hybrid formations, e.g. *-ėz-*: *europ-ėz-as* (masc.), *europ-ėz-ė* (fem.) ‘European, pejorative’ ← *Europ-à* ‘Europe’. The dialectal status of a suffix is not a constraint for hybrid formation in the case, when it is used in Aukštaitian dialect, the basis of Standard language, and is not restricted to a narrow area, e.g. *-ok-*: *studenči-ōk-as* (masc.), *studenči-ōk-ė* (fem.) ‘pejorative’ ← *studeñt-as* (masc.), *studeñt-ė* (fem.) ‘student’. Affix pleonasm, a rare phenomenon in Standard language, is peculiar to hybrid diminutives with borrowed stems as well, cf. pleonasm of diminutive suffixes *-ėl-* and *-yt-*, e.g. *figūrėl-yt-ė* (fem.) ← *figūr-ėl-ė* (fem.) ‘melioratives’ ← *figūr-à* (fem.) ‘figure’ (on affix pleonasm cf. Lehmann 2005, 145; Gardani 2015, 537-550; on double diminutives see Manova 2015, 963). Different shades of meaning (i.e. augmentation, diminution, pejoration, melioration) are not a restriction for the formation of diminutives having borrowed stems and indigenous suffixes, e.g. suffix *-ūkšt-*: *aktori-ūkšt-is* (masc.) ‘pejorative’ ← *āktori-us* ‘actor’, *aktori-ūkšt-ė* (fem.) ‘pejorative’ ← *āktor-ė* ‘actress’.

Finally, it can be argued that the affixation constraints are connected with 1) the rare dialectal suffixes characteristic, as a rule, of Žemaitian dialect which is not the base of Standard Lithuanian, e.g. the suffix *-ik-ė* (fem. derivatives); 2) the absence of basic borrowed vocabulary, which can be used for diminutivization in some suffixal derivation types, e.g. the suffix *-okšn-is* (masc. derivatives) is attached only to the indigenous nouns denoting relief (*up-ōkšn-is* ‘brook’ ← *ùp-ė* ‘river’, etc.).

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## Diminutive or singulative? The suffixes *-in* and *-k* in Russian

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Keywords: diminutive, singulative, mass/count distinction, Slavic linguistics, nominal phrases

This paper investigates the semantics and distribution of two Russian suffixes, *-in* and *-k*, each of which has been treated both as singulative and as diminutive (e.g. Timberlake 2004, Musatov 2015). Indeed, some examples suggest that the two fulfill the same function: *gorox* – *gorošina* ‘pea(s)’ [mass] – ‘(one/a) pea’, *grad* – *gradina* ‘hail – hailstone’ for *-in* and *šokolad* – *šokoladka* ‘chocolate – bar of chocolate’, *bumaga* – *bumažka* ‘paper – (small) piece of paper’ for *-k*. However, we argue that *-in* is singulative and *-k* diminutive.

*-in* systematically applies to mass nouns and creates count ones with the meaning “a natural unit of N” (cf. Krifka 1989). While such units are often small in size, this is not obligatory and depends on the kind of object involved: thus, *l’dina* ‘ice floe’ and *kartofelina* ‘a (single) potato’ do not presuppose smallness. In other words, the suffix does not contribute a “small size” component. We propose that *-in* is a mass-to-count operator of type  $\langle\langle e,t \rangle, \langle e,t \rangle\rangle$  that is quite similar to the standardized partition  $\Pi_{ST}$  operator (Chierchia 2010), but less context-dependent (the nature of the units is determined by lexical and general world knowledge, rather than specific context). It functions as the head of  $Cl(assifier)P$  (cf. Borer 2005).

In contrast, *-k* is a diminutive suffix whose main sub-meanings are smallness in size and affection (Jurafsky 1996). The fact that it is not a true singulative is shown by the following: (i) it can create count nouns from count nouns (*sobaka* – *sobačka* ‘dog – small/dear dog’); (ii) it can create mass nouns from mass nouns (*trava* – *travka* ‘grass – low grass / nice grass / weeds’, NOT ‘a blade of grass’); (iii) it is compatible with *-in* (*goroš-in-k-a* ‘a small/nice pea’), and an application of two consecutive mass-to-count operators is unlikely. We propose, along the line of Fortin (2011), that

under its basic semantic meaning “smallness”, the suffix *-k* denotes the following function:  $\lambda P\lambda x. P(x) \ \& \ \text{SIZE}(x) < d_c$ , where  $d_c$  represents the contextually specified expectation value, and appears immediately above CIP, plausibly in SizeP (De Belder et al. 2014). Hence the order *goroš-in-k-a*, not *\*goroš-k-in-a*.

The relation between *-k* and singulativity arises in the following way. The SIZE function applies to individuals with clearly defined boundaries (stable atoms or their sums), cf. Fortin (2011) on the [+b(ounded)] restriction. Therefore, when *-k* combines with a mass-denoting stem, the latter undergoes coercion to a count meaning (unless *-k* is interpreted differently, e.g. as an emotive). The resulting stem semantics constitutes an appropriate input for the diminutive. The mass-to-count operator may be overtly realized as *-in* (*goroš-in-k-a*) or be covert (*bumaž-k-a*). Additional semantic uses of *-k* are derived via metaphorical extension: a low position on a size scale is substituted by a low position on a scale with a different dimension, e.g. value/importance (hence *bumažka* in the sense ‘unimportant paper/document’). Some derivatives (e.g. *snežinka* ‘snowflake’) bear a non-compositional suffix *-ink* (*\*snežina* does not occur) resulting from a re-analysis of *-in-k* (Musatov 2015). *-ink* is a mass-to-count operator that imposes division into small natural units.

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## Prosodic factors in the selection of Bulgarian diminutive suffixes in the perspective of Headmost accent theory

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Keywords: Bulgarian diminutive suffixes, prosody, word stress, Optimality theory, head dominance

The accentual characteristics of the diminutive suffixes (DIMSUFF) in Bulgarian language (BL) are considered in the framework of *Headmost Accent theory* of Revitiadou (1999) within the Optimality theory. It is assumed that most morphemes in lexical accent systems are accentually prespecified and represented in the mental lexicon with accentual features (Steriade, Yanovich 2015, Zora, et al. 2019).

They can be unmarked and marked. When two competitive accent features are encountered in the word, the conflict is resolved on the basis of the morphological head dominance (HeadFaith). The account of the prosodic characteristics is consistent with some aspects of the natural morphology - the search for motivation of morphological preferences in other components of linguistics such as phonology (Dressler 2005).

The aim of the study was to trace the accentual properties of the Bulgarian DIMSUFF in connection to the word structure. Among the sources of the study was the *Reverse dictionary of BL* (2011), and studies on Bulgarian diminutives (Krastev 1976, Manova 2018, 2011, Radeva 2007). The analysis reveals a tendency towards unmarked accentuation of DIMSUFF. In this respect, they resemble the inflectional suffixes in Bulgarian and other Slavic languages (Simonović, Arsenijević 2017). Their accentual behavior depends on the structure and prosodic characteristics of the bases:

A. In underived words the accentuation of the most DIMSUFF depends on the root: if the root is accented, the DIMSUFF is not (1), and if the root is unaccented - the DIMSUFF bears the word stress (2):

(1) Accented root - unaccented DIMSUFF/INFLSUFF

Gender	DIMSUFF	SG/ SGDEF	DIM <sub>1</sub> , DIM <sub>2</sub>	Gloss
M	-ec	<i>hljab</i> (SG)	<i>hlébec</i>	'bread'
		<i>hljàbăt</i> (SGDEF)		'the bread'
F	-ica/-ička	<i>síla</i>	<i>sílica sílička</i>	'power'
N	-ce	<i>žító</i>	<i>žítce</i>	'wheat'

(2) Unaccented root - accented DIMSUFF/INFLSUFF

M	-ec	<i>dážd</i> (SG)	<i>dáždec</i>	'rain'
		<i>dáždăt</i> (SGDEF)		'the rain'
F	-ica/-ička	<i>glavá</i>	<i>glavíca glavíčka</i>	'head'
N	-ce	<i>kriló</i>	<i>krilcé</i>	'wing'

The behavior of the unmarked DIMSUFF attached to one-syllable stems is described by the constraint faithfulness to the stem stress - MatchStemStress (Steriade and Janovic 2015: 261). The stress profiles of the inflected forms function as a collective base in the evaluation of candidates for the derivative – a phenomenon called *inflection dependence*.

B. The stress of the two-syllable stems is preserved in most of the cases after adding DIMSUFF - *če* and *-e*: *găláb* 'pigeon', *gălábče* DIM, but when a vowel is eliminated from the stem, the stress shifts to the next syllable: *petël* 'cock', *petlê* DIM in accordance to the *Secondary mobility principle* (Kiparsky 2010).

C. Some DIMSUFF (-*če*, -*čica*, -*ica*, -*ka*, -*ce*, -*e*) can be added to derived polysyllable bases without changing the stem stress: *priyàtelče* 'friend' DIM, *uprazhnènjce* 'a little exercise', *cigulàrčica* 'small violinist'. When -*čica* is added after -*ost*, it receives the word stress like the definitive article -*ta*: *rádost* 'joy', *radosttá* 'the joy' *radostčica* 'little joy' because of the prosodic structure of the morphemes (-*ta*, -*čica*) – syllables with onset. The DIMSUFF -*k(a)* joins the post-accented derivational suffix -*in(à)* in the same slot without influencing the ultimate stress *toplínkà* 'nice warmth'.

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## Diminutives: Templatic morphology in an agglutinating language

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Keywords: diminutives, Hungarian, templatic morphology, vowel harmony, phonotactics

Most morphology in Hungarian is agglutinative. Diminutive (DIM) formation may be *agglutinative* or *templatic*, where the result satisfies a disyllabic template involving a fixed set of endings. These endings contain a vowel, so the stem is truncated if longer than one syllable, (1–6). In most cases it is the end of the stem that is omitted, (1–5); rarely truncation occurs at the beginning (too), (6). (Unglossed examples are given names.)

- (1) templates with **i**: **piroʃka~pir-i/pir-tʃi**, **paradiʃom~par-i** ‘tomato’, **ʃa:ra~ʃa:r-i**, **izgalmaʃ~izg-i** ‘exciting’, **unalmaʃ~un-tʃi** ‘boring’, **botʃa:nat~botʃ-i** ‘(I’m) sorry’, **mutaʒd~mut-i** ‘show it!’, **dokumentum~dok-ʃi** ‘document’, **nadra:g~na-tsi** ‘trousers’, **ʃu:l~ʃu-si** ‘rabbit’
- (2) templates with **a**: **ilona~i-tsa/il-a/il-ka**, **gustuʃoʃ~gust-a** ‘delicious’, **tsɛruza~tsɛr-ka** ‘pencil’, **borba:la~bor-tʃa/bor-a**
- (3) templates with **u**: **bala:ʒ~bal-u**, **fizɛte:ʃ~fiz-u** ‘salary’, **kuca~kuc-uf** ‘dog’, **pɛlɛnka~pɛl-uf** ‘diaper’, **nata:lia~nat-uf**
- (4) templates with **o**: **fɛrɛnts~fɛr-o:/fɛr-ko:/fɛ-tso:**, **telefɛn~tɛl-o:**, ‘phone’, **bitsikli~bits-o:** ‘bicycle’, **fɛsyltʃe:g~fɛs-ko:** ‘tension’
- (5) templates with **ɛ**: **kole:gium~kol-es** ‘dormitory’, **botʃa:nat~botʃ-ɛs** ‘(I’m) sorry’, **ʃugdi:ʃaʃ~ʃug-gɛr** ‘pensioner’, **kalauz~kal-lɛr** ‘contoller’
- (6) initial truncation: **tsɛtsi:lia~tsil-i**, **petronella~nell-i**, **bernadett~dett-i**, **fɛrdina:nd~na:ndi**

Disyllabic templatic DIM forms have some morphophonological properties that make them unique: (i) while agglutinative morphology characterizes both DIMs and other kinds of suffixation, *disyllabic templatic morphology characterizes only DIMs*; (ii) while both harmonically alternating and harmonically invariant suffixes occur in agglutinative morphology (including DIM forms), the endings involved in *disyllabic templatic DIMs are harmonically invariant*.

Disyllabic templatic DIMs are morphophonologically “root-like”. Root-likeness manifests itself in the following properties (some are categorical, others are gradient with high probability).

### I. Harmonic behaviour of the suffixed form

The neutral vowels **i**, **i:**, and **e**: are transparent both in monomorphemic, (7), and in polymorphemic stems, (8). These vowels may also be antiharmonic: although phonetically front, in some roots they govern back harmony, (9). *Polysyllabic* monomorphemic stems with neutral vowels may not be antiharmonic, (10). Stems are “harmonically consistent”: the roots **pir-** or **vak** govern back harmony, and any stem containing them also governs back harmony, (11). So **pir-i:t** is antiharmonic, because **pir-** is antiharmonic and this stem is polymorphemic, while **zilip** may not be antiharmonic, because it is monomorphemic.

(7) **maki-nak** ‘lemur-DAT’

(8) **vak-i:t-ok** ‘blind-CAUS-1SG’

(9) **pir-ul-ok** ‘red-PASS-1SG, I blush’

(10) **zilip-εk** ‘sluice-PL’, \***zilip-ok**

(11) **pir-i:t-ok** ‘red-CAUS-1SG, I toast’, **vak-i:t-ok** ‘blind-CAUS-1SG’

The name **pirořka** governs back harmony, but its DIM form does not: **pir=i-nεk** ‘P-DAT’. That is, **pir=i** behaves like a polysyllabic *monomorphemic* word: it is not harmonically consistent like a polymorphemic word (**pir-i:t**).

### II. Phonotactics of templatic DIMs vs. agglutinative forms

1. *DIMs imitate root vocalism: they tolerate disharmony better than agglutinative forms.* Most agglutinative suffixes harmonically alternate or contain a neutral vowel if invariant, thus these words avoid disharmony. Cases of disharmony *are* allowed within roots (back+ε; ε+back), but strong disharmony (back+ø/y; ø/y+back) is very rare. Disharmony with ε is common in DIMs, but there are no DIM endings with non-harmonizing ø or y. Back DIM endings with ø/y in the base occur very rarely and hesitate: **tyndε~?%tynd=uf/?%tynd=yf**.

2. *DIMs imitate CC-types in roots: they do not tolerate marked CC-types well, which frequently result from agglutinative suffixation.* In DIMs marked CC clusters are simplified with a higher probability than unmarked clusters (**antal~ant=i**, **viktor~vik=i**); C-initial DIM endings are only attached to truncated stems ending in a consonant they form an unmarked cluster with (**bertalan~ber=tsi**, **nadra:g~na=tsi** ‘trousers’). The possible CC clusters at an agglutinative stem+suffix boundary are much less constrained.

### III. Beyond morphophonology

1. Some frequent forms lose their informal status and/or the semantic connection to their base form, i.e., are *lexicalized*: **pata** ‘hoof’~**pat=ko**: ‘horseshoe’, **bujogo**: ‘baggy trousers’~**buř=i** ‘panties’, **sa:l** ‘thread’~**sa:l=ka** ‘splinter’.

2. The *orthography* of frequent templatic DIMs indicate voice assimilation: ⟨Jóska⟩, not ⟨Józska⟩ ← ⟨József⟩ (⟨s⟩=ř, ⟨zs⟩=ř); ⟨Jutka⟩, not ⟨Judka⟩ ← ⟨Judit⟩ (while agglutinative forms do not, even if they are DIM: ⟨Balázska⟩, ⟨Dávidka⟩).

Thus, there appears to be two distinct morphological subsystems in Hungarian. The larger subsystem is agglutinative, but there is a smaller subsystem which is templatic and only characterizes DIMs (also some frequentative verbs(!)). The forms in the latter subsystem display the phonological and semantic properties of roots and not of morphologically complex words.

## The Swedish suffix *-is* and its place in the theory of diminutivization

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Keywords: Diminutive suffixation, Evaluative morphology, Morphopragmatics, Paradigmatic word-formation, Productivity

Suffixation with *-is* is one of the most productive derivational processes in contemporary, colloquial Swedish (Josefsson 2002). The present study relates *-is* suffixation to theories on diminutive morphology, based on data of +300 items from available corpora of written Swedish (spraakbanken.gu.se), Internet searches, and diary notes of a Swedish child (ages 1–4). Although Swedish lacks a diminutive suffix (Teleman 1970:62), *-is* suffixation shares properties with diminutive formation, as investigated by Dressler and Merlini Barbaresi (1994): it involves a pragmatic effect of [non-serious], violates Aronoff's (1976) Unitary Base Hypothesis, contains the sound-iconic vowel [i], and occurs in child (directed) speech; morphosemantic opaque words on *-is* are lexicalized, and *-is* has unclear head status.

The prototypical bases and output forms of *-is* suffixation are utter nouns (Swedish nouns are utter, U, or neuter, N) (Inghult 1968). In nouns, *-is* governs the subsequent inflections but does not always alter categorial features (1). When combined with adjective or verb bases (2–3), *-is* behaves as a regular derivational suffix (change of word class and semantics). In contrast, words on *-is* without word class change (1, 4–5) behave as morphosemantically transparent diminutives (cf. Dressler & Merlini Barbaresi 1994).

- |                                     |                                 |   |
|-------------------------------------|---------------------------------|---|
| (1) nouns: [katt.U- <i>is</i> ].U   | 'cat- <i>is</i> '               | katt- <i>is</i> -ar.PL 'cat- <i>is</i> -PL' vs. katt-er.PL 'cat-PL' |
| (2) adjectives: [feg- <i>is</i> ].U | '(a) coward- <i>is</i> '        | (feg- <i>is</i> -ar.PL 'coward- <i>is</i> -PL')                     |
| (3) verbs: [skolk- <i>is</i> ].U    | '(a) skip (school)- <i>is</i> ' | (skolk- <i>is</i> -ar.PL 'skip- <i>is</i> -PL')                     |
| (4) adverbs: igen- <i>is</i>        | 'again- <i>is</i> '             |   |
| (5) interjections: hej- <i>is</i>   | 'hi- <i>is</i> '                |   |

Since *-is* tends to be combined with monosyllabic bases, many words on *-is* are explained as shortenings of derived or compound words (6–7) or word groups (8), resulting in parallel forms (lexicalized), often with similar semantics but different stylistic value (Inghult 1968). Adjectives on *-is* (6) are invariant and restricted to predicative position. For nouns, the gender depends on the head of the source word(s) (7–8).

- |                          |   |                                 |                               |
|--------------------------|---|---------------------------------|-------------------------------|
| (6) populär <sub>A</sub> | > | [popp- <i>is</i> ] <sub>A</sub> | 'popular'                     |
| (7) dag.Uhem.N           | > | [dag- <i>is</i> ].N             | 'day-home', i.e. kindergarten |
| (8) bästa vän.U          | > | [bäst- <i>is</i> ].U            | 'best friend'                 |

In Josefsson's (2002) minimalist approach (similar to Distributed Morphology, e.g. Halle & Marantz 1993), *-is* lacks inherent meaning. Moreover, since *-is* does not assign categorial or class

features, it cannot be a head (Josefsson 2002). However, given that only nouns on *-is* inflect, *-is* suffixation poses a problem for theories advocating categoriless roots/stems and affixes (Halle & Marantz 1993, Josefsson 2002, Lowenstamm 2015).

This study adheres instead to a paradigmatic approach, according to which derivational processes manipulate form and meaning in predictable ways (Pounder 2000, Štekauer 2014, Bonami & Strnadová 2019, see also Manova et al. 2020). The study likewise assumes that morphopragmatic aspects come into play for *-is* suffixation, as they do for diminutive suffixation (Dressler & Merlini Barbaresi 1994). Accordingly, words on *-is* can be said to belong to different sub-patterns, paradigmatically organized around the pragmatic feature of [non-serious] and being more or less prototypical instantiations of derivational, grammatical morphology (e.g. [A/V-*is*]<sub>N</sub> or [X-*is*]<sub>X</sub> are predictable by rules whereas shortened forms are less so).

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## Slavic diminutive morphology: An interplay of scope, templates and paradigms

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Keywords: diminutives, homophony and repetition of suffixes, scope, templates, paradigms

This talk tackles diminutive morphology with an emphasis on suffix homophony and repetition. We claim that for composition and decomposition (Fruchter & Marantz 2015) of diminutives, one needs to refer to scope and templates (Rice 2000, Hyman 2003), as well as to paradigms both inflectional (Stump 2001) and derivational (Bonami & Strnadová 2019).

Since there are fewer morphemes than words, morphology uses various strategies for expression of meaning and the same form of a morpheme can be:

1) “recycled” in different positions, e.g. the Slavic *-k-* can be a derivational and evaluative suffix; however, evaluative suffixes scope over derivational ones semantically and therefore follow the latter in the word form;

2) combined with different inflectional suffixes, e.g. the nominal *-k-* can be followed by  $-\emptyset$ ,  $-a$ ,  $-e$  ( $k:\check{c}$ ),  $-i$ ,  $-o$ ; i.e., form in one slot of a template remains constant ( $-k-$ ) but changes in another slot, overall forms become different ( $-k\emptyset$ ,  $-ka$ ,  $-če$ ,  $-ki$ ,  $-ko$ ) and indicate different semantics (object, person, diminutive). Likewise for [ $-k-$ +inflection] in diminutive verbs, cf.  $-k-am$  in (1);

3) attached to different bases, e.g. in Bulgarian  $-k-$  tends to select interjections for the formation of diminutive verbs (1), but nouns for nominal diminutives (4).

(1) *drǎn(-drǎn) > drǎn-k-am* ‘(to) jingle, chatter’ (Bulgarian)

For the analysis we rely on the following template:

(2) root-(derivational suffix<sub>D</sub>)-(evaluative suffix<sub>E</sub>)-(inflectional suffix<sub>I</sub>)

We first show that there are different types of diminutives: inflectional (3), with an empty evaluative slot, and diminutives proper (4), with an overt evaluative suffix:

(3) *meč-k<sub>D</sub>-∅<sub>E</sub>-a<sub>I</sub>* ‘bear’ > *meč-∅<sub>D</sub>-∅<sub>E</sub>-e<sub>I</sub>* ‘small bear, baby bear’ (Bulgarian)

(4) *knig-∅<sub>D</sub>-∅<sub>E</sub>-a<sub>I</sub>* ‘book’ > *kníž-∅<sub>D</sub>-k<sub>E</sub>-a<sub>I</sub>* ‘small book’ (Bulgarian)

Then, we set apart homophonous suffixes of different types,  $-k-$  in (5):

(5) *ruč-k<sub>D</sub>-∅<sub>E</sub>-a<sub>I</sub>* ‘pen’ > *ruč-eč<sub>D</sub>-k<sub>E</sub>-a<sub>I</sub>* ‘small pen’ (Russian)

The differentiation of derivational and evaluative slots is further motivated by the properties of the two types of suffixes: evaluative suffixes can be repeated on adjacent cycles (Szymanek & Derkach 2005), DIM2 in (6a,b) and (8), while derivational suffixes cannot:

(6a) *dom-∅<sub>D</sub>-∅<sub>E</sub>-∅<sub>I</sub>* ‘house’ > DIM1 *dom-∅<sub>D</sub>-ek<sub>E</sub>-∅<sub>I</sub>* ‘small house’ > (Polish)  
DIM2 *dom-∅<sub>D</sub>-ecz<sub>E</sub>-ek<sub>E</sub>-∅<sub>I</sub>* ‘very small house’

(6b) *kep-∅<sub>D</sub>-∅<sub>E</sub>-e<sub>I</sub>* ‘cap’ > DIM1 *kep-∅<sub>D</sub>-enc<sub>E</sub>-e<sub>I</sub>* > (Bulgarian)  
DIM2 *kep-∅<sub>D</sub>-enc<sub>E</sub>-enc<sub>E</sub>-e<sub>I</sub>*

A Slavic language has about 10 DIM1 suffixes but only a few can be used as DIM2 (Manova 2015): Bulgarian  $-enc(-e)$  (6b) can but  $-č(-e)$  cannot (*prǎst-en<sub>D</sub>-∅<sub>E</sub>-∅<sub>I</sub>* ‘ring’ > DIM1 *prǎst-en<sub>D</sub>-č<sub>E</sub>-e<sub>I</sub>* > DIM2 *prǎst-en<sub>D</sub>-č<sub>E</sub>-enc<sub>E</sub>-e<sub>I</sub>*;  $*-enc<sub>E</sub>-eč<sub>E</sub>-e<sub>I}</sub>$ ,  $*-č<sub>E</sub>-eč<sub>E</sub>-e<sub>I}</sub>$ ).

Cases in which no diminutive exists are explained in terms of derivational paradigms. We define derivational paradigms similar to inflection classes (Manova et al. 2019): nouns with the same phonology and/or semantics (phonology means terminating in the same way in (nominative) singular) that get the same set of suffixes (for Russian, Zaliznjak 1977, Corbett & Fraser 1993). Diminutives from nouns denoting persons are blocked semantically and even if phonology allows a derivation, (7)

in analogy to (8) due to the same inflection *-a*, (7) does not have anything to do with smallness, while diminutives from objects (8) uniformly denote small objects:

- (7) *pap-Ø<sub>D</sub>-Ø<sub>E</sub>-a<sub>I</sub>* ‘dad’ > *pap-Ø<sub>D</sub>-k<sub>E</sub>-a<sub>I</sub>* (rare) > *pap-Ø<sub>D</sub>-oč<sub>E</sub>-k<sub>E</sub>-a<sub>I</sub>* (Russian)  
 (8) *kart-in<sub>D</sub>-Ø<sub>E</sub>-a<sub>I</sub>* ‘picture’ > DIM1 *kart-in<sub>D</sub>-k<sub>E</sub>-a<sub>I</sub>* > (Russian)  
 DIM2 *kart-in<sub>D</sub>-oč<sub>E</sub>-k<sub>E</sub>-a<sub>I</sub>*

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## Parameters of variation in the syntax of expressive size suffixes: Case studies of Russian, German, Spanish, and Greek

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Keywords: expressive morphology, syntactic variation, Russian, German, Spanish, Greek

Cross-linguistically, expressive size suffixes refer to the (big or small) size of a referent and reveal the speaker’s (positive or negative) attitude toward the referent (see Grandi & Körtvélyessy 2015 for an overview). In this paper, we investigate to what extent this cross-linguistic uniformity at semantic level translates into uniformity at structural/morphosyntactic level. As case studies, we focus on four languages belonging to different branches of the Indo-European family: Russian, German, Spanish, and Greek.

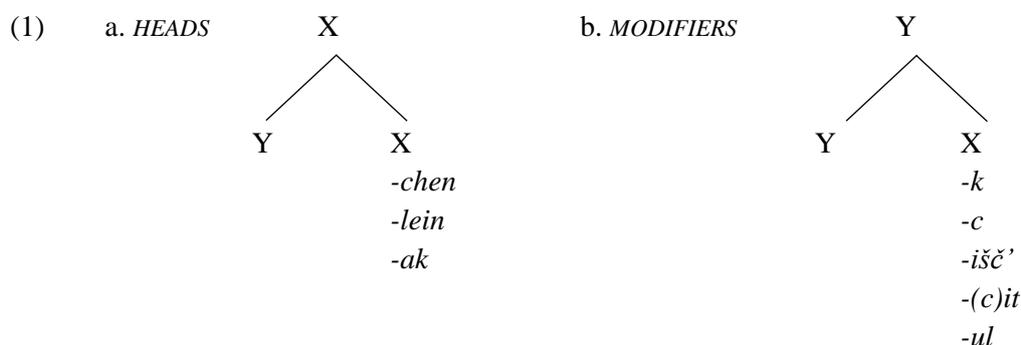
We provide empirical evidence showing that expressive size suffixes differ syntactically in all four languages. In particular, the syntactic differences in the suffixes under investigation concern two main parameters: the manner of attachment (heads vs. modifiers) and the place of attachment (suffixes

attaching only to nouns vs. suffixes attaching to more than one category). The Russian size suffixes are syntactic modifiers that can attach only to a noun category; similarly, the German size suffixes *-chen* and *-lein* combine only with nominal bases, but, on the other hand, function as syntactic heads and not as modifiers. In Spanish, the size suffix *-(c)it* is a syntactic modifier that can attach to various syntactic categories. Finally, in Greek, the two main size suffixes *-ak* and *-ul* differ both in terms of the manner (the former is a syntactic head, and the latter is a modifier) and the place of attachment (*-ak* attaches only to nominal bases whereas *-ul* can attach to various categories). This variation indicates that, cross-linguistically, expressive linguistic objects can have the same meaning but different syntactic properties, as summarized in Table 1.

Expressive size suffixes	Syntactic heads (Manner of attachment)	Attaching only to nouns (Place of attachment)
Russian <i>-k/-ek/-ok/-ik; -c/-ec/-ic; -išč'</i>	*	✓
German <i>-chen; -lein</i>	✓	✓
Spanish <i>-(c)it</i>	*	*
Greek <i>-ak</i>	✓	✓
Greek <i>-ul</i>	*	*

Table 1. Syntactic properties of expressive size suffixes in Russian, German, Spanish, and Greek

Our analysis is couched within the framework of *Distributed Morphology* (Halle & Marantz 1993, Harley & Noyer 1999, Embick & Noyer 2007, among many others), which enables us to capture the attested structural differences between the expressive forms in each language. More specifically, with respect to the manner of attachment, the German suffixes and the Greek suffix *-ak* function as syntactic heads that project and, therefore, determine the syntactic category and the grammatical features of their complements (1a). On the contrary, the Russian and Spanish suffixes and the Greek suffix *-ul* are syntactic adjuncts that do not alter the morphosyntactic properties of the node they attach to (1b):



With respect to the place of attachment, our analysis shows that the Russian and German suffixes and the Greek suffix *-ak* merge only with *n* heads, as opposed to the Spanish suffixes and the Greek suffix *-ul*, which may merge with various categorizers (*n/a/v*) or directly with roots.

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## Pejorative suffixation in present-day English: A sociolinguistic analysis of *-ie* and *-o* nominalisations

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Keywords: suffix *-ie*, suffix *-o*, pejoration, morphopragmatics, variationist sociolinguistics

The diminutive suffixes *-ie* (also *-y* and *-ey*) and *-o* are both used to form terms of address (e.g. *kiddie*, *kiddo*), hypocristics (e.g. *Tommy*, *Tommo*), or pejoratives (e.g. *lezzie*, *lezzo*). Unlike the suffix *-o*, whose productivity is rather limited (Bauer et al. 2015), the *-ie* suffix is productive in most varieties of English (Lipka 2002, and Bauer 2008). Even though *-ie* is believed to generally convey positive attitudes, as in *hubbie* and *doggie*, it is not uncommon for its function to be reanalysed to produce pejorative forms, as in *blackie* and *froggie* (Sánchez Fajardo & Tarasova 2020). It has also been suggested that pejoratives ending in *-o* convey more negative (or offensive) connotations than *-ie* nominalisations (Schneider 2003). This premise leads to two research questions: (i) to what extent are derivational bases (e.g. *lezz-* in *lezzie/lezzo*) and their referents semantically relevant to the creation of pejoratives?; and (ii) are pejoratives ending in *-ie* and *-o* equally perceived by speakers of different varieties of English?

The presented pilot study is aimed at examining morphological and sociolinguistic properties of the suffixes *-ie* and *-o* in some varieties of English (i.e. AmE, BrE, AusE, and NZE). We assume a usage-based approach on the morphopragmatic level to explore which morphological elements contribute stable pragmatic effects (Barbaresi & Dressler 2020). Also, special attention is given to the framework of variationist sociolinguistics (D'Arcy 2020) to unravel the roots of pejoration-arousing suffixation.

A list of pejorative pairs (henceforth PPs) with the same base, as in *weirdie/weirdo*, *lezzie/lezzo*, has been compiled from descriptive dictionaries (OED3, MWD11, DCS, GDS) and online corpora (NOW, BNC, COCA). The collected data are analysed to see if there are specific morphological paradigms in the formation of pejoratives that use *-ie* and *-o* suffixation, and whether formal similarities within the paradigm can be considered accountable for semantic and/or functional shift in the derivational outputs. The data obtained from online questionnaires containing contextualized PPs corroborate that respondents can associate the output semantics of pejoratives with their contexts or pragmatic implicatures.

The preliminary findings suggest that the stronger negative connotations in *-o* units are determined by the semantics of the derivational base that is enhanced by the association of the suffix

with hate speech. On the other hand, *-ie* units seem to be less dependent on the semantic features of the derivational bases, hence a more positive perception of *-ie* nominalisations by native speakers is observed in the data collected from online questionnaires. This can be explained by the association of the suffix with child-directed speech and the concept of diminution. Unlike *-ie* nominalisations, derivatives ending in *-o* never convey the notion of ‘size’, which makes *-o* less polysemous and thus less cognitively complex.

Overall, our findings allow for a suggestion that the reanalysis of the function of the suffix (diminution → pejoration) requires speakers to rely on contextual cues to unpack the semantic content of *-ie* nominalisations.

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## Decomposing so-called diminutives in Turkish

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Keywords: augmentatives, diminutives, Turkish, nanosyntax, decomposition

The suffix *-cIk* has generally been accepted to be a diminutive/endearment morpheme in Turkish. However, the different effects resulting from *-cIk* attaching to nominal versus adjectival bases have not been discussed (Sezer 1981, Sebüktekin 1984, Taylan 2015), except for Göksel & Kerslake (2005). They state that *-cIk* amplifies the “smallness” meaning of the adjective, as in (1), which is unlike (2), clear diminutive with a nominal base. This does not predict items such as (3) and (4) where there is no clear smallness meaning within the adjective.

(1) <i>küçücük</i> very small	from	<i>küçük</i> small	(2) <i>kitapçık</i> booklet	from	<i>kitap</i> book
(3) <i>sıcacık</i> very warm	from	<i>sıcak</i> warm	(4) <i>yumuşacık</i> very soft	from	<i>yumuşak</i> soft

**Proposal.** The nominal and adjectival *-cIk* are two different suffixes and that the adjectival *-cIk* is a complex suffix which is a combination of the suffix *-cI* and *-k*. Whereas *-k* is a spell-out of the UP and POINT features, *-cI* is an augmentative suffix which only targets negative ordered adjectives or adjectives with diminutives, as in (6). That is, *-cI* spells out the feature AUG and NEG. The basis of this decomposition ([UP [POINT [NEG [DIR DIM]]]]) is also justified by Wyngaerd et al. (2020). The decomposition in (5) implies that some adjectives like *küçük* are also decomposable as [[*küçü-*]-*k*].

(5) [[[[*küçü-*]<sub>Dir+Dim</sub> *-cü*]<sub>Neg+Aug</sub> *-k*]<sub>Point+Up</sub> (6) [[[[*yakın*]<sub>Dir+Dim</sub> *-ca*]<sub>Dimu</sub> *-cI*]<sub>Neg+Aug</sub> *-k*]<sub>Point+Up</sub>

**Evidence.** A piece of evidence comes from voice change processes. The very same bound forms proposed in (5) also exist when they form causatives, like *küçü-lt* or *yumuşa-t* (Taylan, 2015) Our proposal suggests that these suffixes spell out not only the voice, but also POINT and UP features. Additional evidence comes from the stress patterns, while (1), (3), and (4) have non-final stress, (2) does not.

Following these observations and assumptions, the unproductivity of the so-called suffix *-cIk* can be explained via the selection of a set of features, i.e. scale and negation information necessity. In the nanosyntactic model I posit following Starke (2009) and Wyngaerd et al. (2020), the Turkish augmentative suffix *-cI* only surface with neg-ordered adjectives (1) (see Kennedy & McNally 2005) or adjectives with a diminutive suffix (9d), which are scalable negative ordered projections, unlike (9b), which does not have neither DIMINUTIVE nor NEG head.

(9) a. <i>derin göl</i> deep lake	b. * <i>derin-cik göl</i> very deep lake	c. <i>derin-ce göl</i> deepish lake	d. <i>derin-ce-cik göl</i> not-so-deep lake
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The ungrammaticality of (9b) is a result of mismatching sub-morphemic features. Positive ordered adjective lacks the necessary projection of [NEG]. When provided with a necessary context, let's say we are calling out to a friend named Derin, the word *derincik* becomes grammatical as a form of endearment. Thus, this analysis puts forward an entirely predictable nature of the augmentative and diminutive selection. With the feature [NEG], the suffix surfaces as an augmentative. When the feature lacks, it is either ungrammatical or diminutive depending on the heuristics.

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## Structural functions of diminutives in modern Russian

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Diminutives make more than 50% of all nouns in Russian, Lithuanian and Spanish child-directed speech (CDS), whereas in German CDS their share hardly reaches 3% (Savickiene, Dressler (eds.) 2007). In standard Russian they make about 1,4% of all nouns according to the calculations based on Russian National Corpus (RNC) depending on the speech situation and individual preferences. However, Russian is still a diminutive-rich language even compared to other Slavic languages, like Bulgarian. According to Vaseva (2006) Bulgarian translations contain significantly less diminutives than original Russian texts. This language-specific and individual variation can hardly be explained by semantic or pragmatic reasons.

The overuse of diminutives in Russian is severely criticized by educated people as an example of bad taste, or “new vernacular Russian” (Krysin, Desheriev 1989). This shows that speakers can take control over their use but, for some reasons, their share in spoken Russian increases.

My investigation is based on the analysis of 52 most frequent diminutive lemmas extracted from RNC. Clearly semantic function is characteristics of 15 such lemmas, like *dyr-očka* ‘hole-DIM’ or *dom-ik* ‘house-DIM’. Body-parts are used in diminutive form to show small size + affection, e.g. *nož-ka* ‘foot-DIM, or *uš-ko* ‘ear-DIM’. Nouns naming food and drinks are used in this form in informal communication, e.g. *vod-ička* ‘water-DIM, *cha-ek* ‘tea-DIM’, *ja-ičko* ‘egg-DIM’. Some diminutives express positive associations with their referents: *soln-yško* ‘sun-DIM’, *cvet-oček* ‘flower-DIM’. Informal addressing forms are usually built from kinship or friendship terms, like *det-ka* ‘baby-DIM’ or *devč-onki* ‘girl-DIM.PL’. The last group contains lexicalized diminutives that differ semantically from their simplicia: *trub-ka* ‘pipe’ ← *truba* ‘tube’, *ruč-ka* ‘handle’ ← *ruka* ‘hand’ etc.

However, 12 of 50 frequent diminutives did not demonstrate any semantic or pragmatic reason for their choice. They can be replaced by simplicia in all contexts, e.g. *kniž-ka* ‘book-DIM’, *kolen-ka* ‘knee-DIM, *tetrad-ka* ‘copy-book-DIM’ etc. Those unmotivated diminutives were analyzed from morphonological point of view.

Most of the unmotivated diminutives are built from simplicia with rare and difficult final part, e.g. only 19 words in Russian end with *-iga* like *kniga* ‘book’ and only 7 of them are still used in modern Russian. Thus, we assume that unmotivated diminutives help to avoid rare and unproductive final parts of nouns making them salient and morphonologically clear. This coincides with the earlier observations that diminutives simplify Russian system of declension (Olmsted 1994) and serve as a trigger for the acquisition of gender and case (Kempe, Brooks, Mironova, Fedorova 2003, Protassova, Voeikova 2007). Such assumption is based on the fact that most productive diminutive suffixes in

Russian date back to the Old Slavonic –ЪК/-ЪК suffixes that provide unclear vowel inflectional endings with the prosthetic consonant –k- making them sound clearer. Some extra-evidence for the significance of their morphological form is provided by new frequent and productive derivation patterns in modern spoken Russian, like recent univerbats with –ka built from NPs: *moloč-ka* ‘milk products’ ← *moločnaja produkcija*, or even *sobač-ka* ‘dog food’ ← *sobačja eda* that sound homophonous with ‘dog-DIM’ (Sallonen 2008).

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## WORKSHOP 10

### Evidential strategies. Description and explanation

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Keywords: evidentiality; evidential strategies; verb tenses; syntax/semantics-pragmatics interface, first/second language acquisition

From the seminal work of Chafe and Nichols (1986), to the recent Aikhenvald (ed. 2018), many aspects have been debated with respect to *evidentiality*. To begin with, there is still no consensus on the definition of the term. From a restricted point of view, evidentiality is understood as a linguistic category that expresses the ‘source of information’ (internal-speaker or external-other) or the ‘type of evidence’/ ‘mode of access to information’ (direct or indirect) that the speaker possesses for their assertion (Aikhenvald 2004, 2018; Albelda 2015, Diewald & Smirnova 2010, a.o). From a different perspective, the notion of evidentiality is understood as overlapping with others like epistemic modality (Dendale & Tasmowski 2001; McCready & Ogata 2007; González Ruiz et al. 2016, a.o.), or even integrated into broader categories such as *epistemicity* (Boye 2010), *perspectivization* (McCready 2015) or *stance* (Bermúdez 2005, among others). The boundary between evidentiality and mirativity has also been discussed in the literature (DeLancey 2001 among others).

On the other hand, although for many authors evidentiality is a grammatical category limited to languages with specific morphological paradigms encoding information source or mode of access to information (Diewald & Smirnova 2010, Aikhenvald 2018), others defend that the full understanding of this linguistic domain requires the study of languages that express evidentiality by other linguistic means: the so-called languages with evidential strategies (cf. to illustrate, from different theoretical frameworks, Cornillie 2007; Squartini, in all his works).

Languages with evidential strategies—most European—express the mode of access or source of the information on which the speaker bases the content of their assertions in three ways:

1- by means of lexical-conceptual resources, such as discourse markers or sentential adverbs, or by way of compositional means, combining lexically expressed concepts (verbs of speech and perception, verbs of belief or the verb *parecer* ‘seem’ for Spanish; lexical-conceptual resources will not be the focus of this workshop).

2- by means of non-lexical resources in which content related to the “speaker’s trace” also emerges, for example, by syntactic means: copular structures (evidencial-*estar* in Spanish, Escandell-Vidal & Leonetti 2002, 2015; Escandell-Vidal 2018a,b, Pérez-Jiménez et al. 2018, Gumiel et al. 2019, Sánchez Alonso et al. 2016); insubordination structures (Demonte & Fernández Soriano 2005, 2009; de la Mora & Maldonado 2015, Corr 2018); impersonal structures expressing general knowledge evidentiality (Fernández 2008, Hugo 2011, Vilinbakhova 2018), clitic/subject raising structures (Rooryck 2001; Bermúdez 2006). Also, evidentiality is expressed by prosodic means (Escandell-Vidal 1998, 2002, 2017; Estellés-Arguedas 2015; Roseano et al. 2016; Vanrell et al. 2017; among others)

3- by means of the extension of temporal and aspectual categories: conjectural future and conditional (Squartini 2001, 2008; Dendale 2001, Bermúdez 2005; Escandell-Vidal 2010, 2014; among others),

evidential-oriented inferential meaning of past tenses (cf. indirect evidence, reportative) (Saussure 2003, 2013; Squartini 2001; Escandell-Vidal & Leonetti 2003; Amenós 2010, 2015; Saussure 2013; Azpiazu 2016), or mirative readings of the pluperfect in some Spanish contact varieties in Latin America (Alcázar 2018).

**The general goal of this panel is to host talks that bring up problems related to when, and under what conditions, languages that lack grammaticalized evidential paradigms use grammatical mechanisms (i.e., non-lexical means, characterized by non-cancellability and by not being context-dependent) to systematically convey evidential meaning.**

This panel aims to bring together talks that revolve around four general research questions

1) In what form is evidentiality represented in grammar? Or, in other words, what is the place of evidentiality in the grammars of languages that lack evidential paradigms? Syntax, compositional semantics (propositional or non-propositional meaning), pragmatics? Is evidentiality an interface phenomenon between linguistic components?

2) To what extent is evidentiality a specific and uniform category in languages without grammaticalized evidentials? What are the limits with other notions such as modality or mirativity? Is it a semantic primitive, or is it the result of the interaction of other more basic features (like, for example, *learning time*)? What primitive theoretical notions are needed to account for the observed phenomena? Is it necessary to refer to more specific sub-classes of evidentiality using concepts such as perspectivization or subjectivization?

3) What relationships exist between evidential and non-evidential interpretations associated with a single linguistic unit or mechanism? Could there be a single basic and undetermined meaning that is further specified in a compositional way? And, if so, what are the conditions and requirements necessary to obtain the evidential interpretations?

4) In consideration of cross-linguistic contrasts in the means for encoding evidential meaning, what can data on the native and non-native speaker's understanding and production of evidential meaning contribute to the understanding of the previous questions?

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## Evidentiality from a developmental perspective: conjectural future in Catalan / Spanish bilinguals

Aoife Ahern, Jose Aménos-Pons and Pedro Guijarro-Fuentes

We present a study on the use of the future tense (FUT) for expressing conjectural evidential meaning by Mallorcan Catalan-Spanish bilinguals. In the Romance varieties, FUT can trigger conjectural interpretations (Squartini 2001, Escandell-Vidal 2014), which have been described as cases of contextual enrichment of a core semantics, common to all Romance languages. However, different cross-linguistic restrictions apply on such enrichment processes. Conjectural interpretations of Catalan FUT are rare, and tend to be limited to stative verbs; in Spanish they are merely favoured by statives. In Catalan, uses of conjectural FUT are infrequent, while in Spanish, they are more frequent than chronological ones. Additionally, conjectural FUT in Spanish may appear in concessive environments, while these constructions are uncommon in Catalan.

The present study focuses on Catalan/Spanish bilinguals. These participants provide opportunities for analyzing the impact of the factors of language dominance, mode of bilingualism (early simultaneous vs. sequential) and of the varying degrees of proficiency in each language on the expression and interpretation of conjectural FUT tense uses in Spanish. 50 bilingual speakers from the Balearic Islands, with varying degrees of bilingualism according to the Bilingual Language Profile (Birdsong et al 2012), performed two tasks in both Catalan and Spanish: firstly, choosing between FUT and two other ways of expressing conjecture in specific utterances; and secondly, judging the acceptability of different conjectural uses of FUT (with various aspectual combinations). These participants' responses were compared to those of a group of 30 monolingual Spanish speakers matched in age and other external variables to the bilinguals. Our data indicates that more balanced bilinguals have more accurate and categorical judgements, since they clearly distinguished each languages' restrictions on conjectural interpretations; for Catalan-dominant participants, conjectural FUT in Spanish was relatively less accepted; finally, for simultaneous bilinguals identifying as Spanish-dominant speakers, more variability was found overall, plus lower accuracy in judgements on Catalan. Thus, the sensitivity to the factors determining the appropriacy of conjectural FUT uses can be correlated with more balanced bilingualism. The data will be considered in light of current views on the grammar/pragmatics interface and on bilingual variability as an indicator of contrasts in their two language systems (Kroll et al, 2012).

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**On Evidentiality and perception.  
Under-specified adjectives in the Spanish non-finite complement of *ver*,  
'see'**

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**Keywords:** evidentiality, under-specified adjectives, perception verbs

The Spanish individual level predicates *alto* and *convinciente* can be combined with both *ser* and *estar*:

- (1) a. Juan es increíblemente {alto ~ convincente}.  
       Juan SER:PRS.3SG amazingly tall ~ convincing  
 b. Juan está increíblemente {alto ~ convincente}.  
       Juan ESTAR:PRS.3SG amazingly tall ~ convincing

According to Escandell Vidal (2018: 69), *estar* is responsible in (1b) for the presupposition that the predication is linked to a time-space bounded situation; the adjectives, by contrast, denote unbounded properties. The mismatch is resolved by activating an inferential process: the predicate maintains its classifying and categorizing character, but the knowledge base for that categorization is presented as anchored to a specific situation of direct experience. Notice that in (2), the evidential content of direct experience attributed to the combinations of *estar* with individual level predicates is expressed lexically, i.e., through the verb of perception:

- (2) Vimos a Juan increíblemente {alto ~ convincente}.  
       see:PST.PFV.1PL to Juan amazingly tall ~ convincing

With this approach as starting point, I will pay attention to the following sentences:

- (3) a. Lo vimos ser increíblemente {\*alto ~ convincente}.  
       him see:PST.PFV.1PL SER:PRS.3SG amazingly tall ~ convincing  
 b. Lo vimos estar increíblemente {\*alto ~ convincente}.  
       him see:PST.PFV.1PL ESTAR:PRS.3SG amazingly tall ~ convincing

In (3), neither of the copulative verbs are excluded, but the (un)grammaticality of the examples depends on the adjective we choose. My aim is twofold. First, I will try to elucidate the contribution of both *ser* and *estar* and the adjectives to the interpretation of the sentences. Second, I should also face the challenge of explaining whether sentences such as *Lo vimos estar increíblemente convincente* are an exception, and why, to the assumption that by their very nature, the evidential meanings are incompatible with each other (Escandell Vidal 2018: 84).

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## When an *evidential* becomes a contact-induced evidential strategy: The case of Guaraní particles in Paraguayan Spanish

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Keywords: evidential, evidential strategy, language contact, Guaraní, Paraguayan Spanish

Paraguayan Spanish is characterized by some peculiarities due to the intense contact with Guaraní (Usher 1976, Palacios 2001), which are altogether described with the term “Paraguayan Spanish” (Thun 2005). The term “Guaraní”, in turn, bundles several varieties that can be distinguished, among other things, on the basis of their degree of influence by Spanish. Among the peculiarities in Paraguayan Spanish are evidential particles to express information source.

In this paper we are concerned with the Guaraní evidential particles *ndaje* (‘they say’), *ra’e* (‘había sido’) and *he’i* (‘s\*he says’). Guaraní *ndaje* belongs to the “morphemes whose semantic interpretation has sentential scope and is usually of evidential or attitudinal nature” and it is used to express indirect knowledge/reportative evidentiality (Estigarribia 2017: 52). Guaraní *ra’e* expresses inferential evidence, having extensions to mirativity so that it is also described as particle of ‘delayed perception’ (Avellana 2013: 40, Palacios 2008: 291). *He’i* (‘s\*he says’) from the Guaraní verb *e* (‘say’) is also used as a quotative marker in Paraguayan Spanish.

By means of a qualitative corpus analysis – the corpus consisting of newspaper articles from the Paraguayan rainbow press – we investigate the functions of these particles as evidential strategies when used in Paraguayan Spanish:

- (1) Motociclistas no tienen carril y por eso se van para cualquier lado, **ndaje**.  
‘Bikers don’t have a lane so that they drive around everywhere, **they say**’
- (2) Una mujer fue denunciada por sus patrones al ser pillada de que los estaba “esquilmando” sistemáticamente **ra’e**.  
‘A woman was denounced by her employers when she was caught systematically “robbing” them’
- (3) La lugareña Eli Méndez, a través de sus redes sociales **he’i** que hace varios días ya se había percatado que [...]  
‘The local Eli Mendez, through her social networks, **she says**, had already noticed several days ago that [...]

In detail, the aims of the study are the following: i) after showing the functions of the particles they fulfil in Guaraní, ii) we investigate their use in Paraguayan Spanish, more precisely in the rainbow press, and iii) we investigate the influence or interaction with other evidential strategies such as Spanish lexical means of expression as in (4) where *supuestamente* (‘supposedly’) and *ndaje* are used in one and the same sentence:

- (4) **Supuestamente** se trataría de una venganza del pirómano, quien tiene una pelea con los familiares de su exnovia **ndaje** [...] ‘Supposedly this would be a revenge of the pyromaniac, who has a fight with the relatives of his ex-girlfriend, **they say** [...]’

The overall aim of the study is to show the systematic use of these particles in the Paraguayan rainbow press, which goes far beyond nonce borrowing or spontaneous code switching. In Paraguayan Spanish, these particles do not seem to be fully grammaticalized (yet) so that they function like a contact-induced evidential strategy.

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## Testing evidential interpretations with *estar*+ILP.

### A preliminary survey

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**Keywords:** evidentiality, copulas, Individual-Level predicates, Stage-Level predicates, accommodation.

Asserting (1)a-b commits the speaker to having direct experience about the tastiness of the cat’s food and about María’s physical appearance.

- (1) a. ¡La comida del gato está riquísima!  
the food of.the cat be<sub>ESTAR</sub>.PRS3SG tasty.SUP  
‘The cat’s food tastes very good!’
- b. María está muy joven.  
María be<sub>ESTAR</sub>.PRS3SG very young

‘Maria looks very young.’

In various papers (Escandell-Vidal & Leonetti 2002; Escandell-Vidal 2018a, 2018b, 2019) it has been suggested that the source of the experiential interpretation with *estar* results from the mismatch between *estar* and an Individual-Level Predicate (ILP). *Estar* conveys the presupposition that the predication is linked to a spatio-temporally bounded situation (Maienborn 2005; Sánchez-Alonso et al 2016), but ILPs are unbounded and cannot satisfy the anchoring requirement. The direct experience interpretation in *estar*+ILP is derived from the need to satisfy the above-mentioned semantic requirement of the copula *estar*: the need to solve the mismatch creates a judge-dependent predication by accommodating an information-acquisition situation of direct experience.

If the above proposal is right, the immediate prediction is that the occurrence of *estar*+ILP will be a sufficient condition to trigger an accommodation process in which the hearer infers the existence of an acquisition situation of direct experience, i.e., the direct experience reading will arise whenever *estar* is combined with an ILP, even in the absence of any facilitating context in which direct experience is available.

To test this hypothesis, an interpretation experiment was carried out. Participants were given isolated copular sentences with *estar* followed by either an ILP or a SLP (Stage-level Predicate). They had to rate on a 5-point Likert scale how likely it was that the speaker had direct experience (seen/tasted/touched) about the quality s/he was attributing.

The results show a significantly strong preference towards the experiential interpretation in *estar*+ILP, but not in *estar*+SLP. This result is then compatible with the starting hypothesis and supports the idea that if the context does not provide data about the information acquisition situation, the linguistic mismatch found in *estar*+ILP structures is enough to induce the accommodation of a direct experience situation.

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## Evidentiality and variation in the complementizer phrase: the case of *deísmo*

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Keywords: *deísmo*, evidentiality, modality, *dequeísmo*, evidential marker

The complementizer phrase projection has been associated with an evidential content. For Spanish it has been argued that the *dequeísmo* construction (*Me dijo de que vendría*) has an evidential meaning, since the presence of the prepositional marker *de* - as opposed to the standard form without *de* - implies a lesser commitment to the truth of the propositional content of the subordinate clause). *Deísmo* is the insertion of a non-required prepositional marker *de* before a non-finite clause:

- (1) a. Me apetece (de) salir  
Me.DAT want.3.SING.PRES. (of) go out-INF'  
'I want to go out'  
b. Intentó (de) acompañarle  
Try.PAST.3.SING (of) join.INF.-him.DAT  
'He tried to join him'

Studies on *deísmo* have not investigated in detail what position the particle *de* occupies in the sentence left periphery and what its meaning contribution, is any (Carrasco & Peinado, in press; Gutiérrez, 2019, Gutiérrez in press). In most papers, *de* is analyzed as a defective complementizer that does not change the meaning (Camus 2013; De Benito & Pato 2015). However, Di Tullio 2011, 2012 associates *deísmo* construction with a prospective meaning in American Spanish, and Carrasco & Peinado (in press) consider that *de* is a mark of evidentiality with visual perception verbs, specifically, an indication that the source of knowledge is an indirect source of inferential type.

In this talk we will show the results of a preliminary experiment whose objective is, first, to see what position occupies *de* in the sentence left periphery and, secondly, what meaning is associated with *deísmo* construction. For *dequeísmo*, Demonte & Fernández Soriano 2005, 2009, associate *de* to the highest part of the functional projection of the complementizer, specifically to an evaluative projection situated above the one containing evidential information. Examination of *deísmo* data reveals some degree of inconsistency among the 30 informants responses to the written questionnaires, probably due to normative pressure. All the informants come from Castilla-La Mancha (Spain). For the position of *de*, most informants point out that the topics precede this segment and, therefore, it can be argued, with Gutiérrez (in press), that the form *de* occupies a lower position in *deísmo* than in *dequeísmo*. Regarding the evidential meaning, again the judgments of the speakers present a lot of variation, and the results of combining *de* with factual verbs, and with adverbs and adjuncts of evidential meaning as *evidentemente* 'evidently' or *con mis propios ojos* 'with my own eyes' are not conclusive to confirm the evidential value of the construction.

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## Mirative evidentials and non-propositional meaning

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Keywords: Evidentiality; Mirativity; Attitude; Affect; Showing-Meaning Continuum

This paper examines evidential mirativity in Modern Greek. Markers of mirativity with a varying degree of grammaticalization have been identified in several languages, i.e., Lhasa Tibetan (Delancey 1992), Korean (Lee 1993), German (Trotzke 2017), Bulgarian (Ivanova-Sullivan 2007, as cited in Torres 2013) and Turkish (Aksu-Koç and Slobin 1986), among others, but not for Modern Greek. Widely-discussed phenomena, namely mirative evidential constructions (Rett and Murray 2013), special auxiliary and main verb constructions, pronouns (Aikhenvald 2012), utterance-final particles (Kim 2018 and Fang 2018) reveal a tendency towards a typology of mirative markers. On a semantic approach, exclamatives (Peterson 2010) and exclamative intonation (Rett 2017) e.g. *John came!* have been analyzed as mirative evidentials in terms of illocutionary mood and other encoded markings (e.g. tense, aspect, etc.). By contrast, our approach considers the full range of lexical expressions typically used in MG to convey surprise in context, thus allowing for an examination of mirativity independently of general patterns which are fairly stereotyped and linguistically coded.

In this study, we are addressing the call for further research (Aikhenvald 2015) into how languages, in our case Modern Greek, convey new or unexpected knowledge and surprise. Our first research question is: Can we identify a class of mirative evidential markers in Modern Greek? The answer is that we can, if we examine frequency rates of the full range of surprise expressions (e.g. interjections, particles, evidentials) compared to the sub-group of mirative evidentials in the same data sample. Occurrence rates are measured in three distinct sources of data across written and spoken discourse, namely corpora (The Corpus of Greek Texts (<http://www.sek.edu.gr/>), the Corpus of Modern Greek ([http://web-corpora.net/GreekCorpus/search/?interface\\_language=el](http://web-corpora.net/GreekCorpus/search/?interface_language=el)), the Hellenic National Corpus (<http://hnc.ilsp.gr/index.php#>), and the Corpus of Spoken Greek (<http://corpus-ins.lit.auth.gr/corpus/index.html>), plays, and tags in social media. The second research question is: Do

these markers convey propositional or non-propositional meaning? To address this question, we examine the lexical markers of mirativity identified in our data, on a par with prosodic realizations rendered by the phonetically tagged corpus of spoken Greek and bodily or facial reactions observed in TV interviews and stage directions of play scripts.

Our findings suggest that the MG data involves predominantly non-propositional types of meaning since mirativity is not delivered by the semantic content of the utterance (as in “*Ωωω! Τι βλέπουν τα μάτια μου;*” ‘Oh! What do I see?’, “*Μα τι λες τώρα;*” ‘But what **are** you **saying** now?’, “*Μπα μπα τι ακούω;*” ‘Well, well, what do I **hear?**’ “*Μη μου πεις!*” ‘Don’t **tell** me!’), “*Αδύνατον! Για να δω!*” ‘Impossible! Let me **see!**’). More crucially, we notice that the primary meaning of evidential verbs is waived in these contexts to express psychological states instead, of positive and negative surprise. Given that in our data evidential markers are not framed by regular declaratives, we will propose an alternative analysis in terms of the showing-meaning continuum (Wilson and Wharton 2006, Sperber and Wilson 2015) where mirativity markers would fall closer to the showing, or ‘partly linguistic’, end of the continuum, as suggested by their contexts of occurrence.

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## The creation of evidentiality in Ibero-Romance

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Keywords: evidentiality; Ibero-Romance; future tense; conditional tense; corpus linguistics

The future and the conditional tenses in Ibero-Romance can convey time, modality and conjecture. The choice for either of them depends on an array of parameters, such as the dialect variety, the written and oral genre or the age of the speaker. In this communication I will analyse the current usage of both tenses in the Romance languages of the Iberian Peninsula, by comparing the data from four sociolinguistic corpora: CORIDAL-SIN, CORILGA, COSER and COD. The results show that the future and the conditional have become morphological evidential markers in Spanish, Galician and Portuguese, and they are gradually displacing the temporal nuance in Catalan too.

Additionally, the current data show the different stages that the birth of evidentiality usually undergoes. In the first place, the future tense is more inclined to turn itself into an evidential strategy, followed by the conditional. Secondly, these tenses adopt in a first stage inferential evidentiality and only later can they develop a reportative one. Furthermore, the geolinguistic distribution allows for pinpointing the evolution of the system of evidentiality throughout the Iberian Peninsula: to begin with, the future and the conditional acquire conjectural nuances as a secondary meaning, but they still convey mainly time. This is the stage in almost all of Catalan. Then, they start expressing conjecture as a primary meaning and, every now and then, they can also be used for time references. This is what happens in the Catalan of Valencia and, based upon the literature, in this phase, the future and the conditional are really morphological markers of evidentiality. Lastly, they only express conjecture and, in a very few cases, they can also emerge for other readings such as time or modality. This stage has been accomplished in the rest of the Iberian Peninsula.

## Individual-Level predicates, locative adjuncts and perspectivization

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Keywords: Locatives, individual-level, modifiers, mismatch, perspectivization

Among the formal tests that are commonly used to distinguish Individual-Level predicates (ILPs) from Stage-Level predicates (SLPs), compatibility with respect to temporal / locative modifiers plays a salient role: only SLPs can be combined with temporal / locative modifiers, as shown in the examples in (1) and (2), from Maienborn (2004).

- (1) Maria was {tired / hungry / nervous} in the car. (SLPs)  
(2) #Maria was {blond / intelligent / a linguist} in the car. (ILPs)

I assume that some kind of interpretive mismatch is found in examples like (2) that precludes the possibility of obtaining a temporal reading of the adjunct akin to the one found in (1). The crucial fact is the possibility of accepting (2) with an *epistemic* or *experiential* reading of the adjunct, i.e. something like ‘Maria was blond / ... according to what you said in the car’; as Maienborn rightly

points out, in this case the locative does not locate a situation of Maria being blonde, but rather the source of a belief about Maria. According to Maienborn, non-locative (i.e., temporal or epistemic) readings of locative modifiers arise when the modifiers behave like *frame-setting modifiers* (Maienborn 2001), instead of VP-modifiers, as in (3)a (but also in (3)b, under narrow focus).

- (3) a. In Bolivia, Britta was blond. ('For Bolivian standards, Britta was blond.')
- b. Britta was blond [<sub>Focus</sub> in Bolivia].

My claim is that epistemic / experiential readings in these cases are not exclusively but mostly obtained as effects of a last-resort inferential mechanism (cf. Escandell-Vidal and Leonetti 2011): more precisely, they result from an operation of mismatch resolution triggered by the search for a non-locative reading. A non-locative reading is needed when locative modifiers cannot receive a straightforward interpretation as VP-modifiers and must thus be interpreted as frame-setting modifiers (even occurring in VP-internal positions, as in (2) and (3b)). This typically happens with ILPs. Epistemic / experiential readings, then, arise as a way of making the modifier compatible with the predicate: in fact, in the communicated proposition the locative is no longer modifying the lexical predicate, but a higher predicate of communication, belief or perception that must be inserted in the explicature of the utterance ('The people in Bolivia considered Britta to be blond'). The key ingredient is the insertion of a subject that experiences a situation, i.e. an alternative source of information – which allows us to characterize these readings as evidential. The resolution strategy is pragmatic.

The strongest argument in favour of a pragmatic approach to epistemic / experiential readings is their systematic presence in a wide variety of contexts and grammatical constructions. The same mechanism can be observed, for instance, in the evidential readings of the copula *estar* in Spanish (Escandell-Vidal 2018), in perspectival readings of tense in different languages (Saussure 2013), and possibly in logophoric and perspectival readings of anaphoric expressions (Kuno 1987). This opens the possibility of unifying the analysis of many disparate phenomena under the notion of *mismatch resolution*.

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## Evidentiality and its grammaticalization in French: A contrastive study based on a spoken French-Tibetan corpus

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Keywords: evidentiality; grammaticalization; French; Tibetan

This paper aims to investigate how evidentiality, i.e. the linguistic expression of information source, interacts with the lexicon-grammar interface. It is based on a semi-guided corpus that was specifically collected in France and in Tibet in order to elicit various evidential forms (16 speakers, approx. 9h, 52,000 words). Tibetan possesses a fully grammaticalized evidential system of obligatory copulas, inflections, and clitics (DeLancey 1986, Tournadre 1996, 2005, 2017, author 2014, Gawne & Hill, eds., 2017), whereas French expresses information sources mainly through its lexicon (Dendale & Tasmowski 1994, Anscombre et al. 2009, Barbet & de Saussure 2012). After general considerations on the distributional differences of evidential markers in French and Tibetan (author 2014, author & co-author, in press), I will focus on three frequent French evidentials: *on voit*, *devoir*, and *il paraît*, which encode direct, inferential, and hearsay evidentiality respectively. We will see how each marker can be considered grammatical on several paradigmatic and syntagmatic criteria (Lehmann 1995[1982]), and to what extent they can be compared to Tibetan evidentials.

*On voit* is an idiomatic phrase that encodes visual perception, and that has emerged as an alternative to the French existential expression *Il y a*. It is used grammatically in an impersonal cleft-structure in order to introduce new topical elements in discourse. Although less frequent, *on voit* is comparable to the direct perception copula *'dug*, or the imperfective suffix *-gi.'**dug* in Standard Tibetan. Following are two examples elicited by a visual task from the contrastive corpus:

- ( *on voit le petit chien qui est dehors*  
1) 'There is (=we see) a little dog that is outside.'
- (2) *khyi de-s A'u.A'u-ze skad brgyab-kyi.'dug*  
dog DEM ahoooo-QUOT noise LV-IMPF DIR  
'(We see) That dog howls "Ahoooo".'

The French auxiliary *devoir* shows several signs of grammaticalization, such as inflectional loss, paradigmaticization, and fixation (Rossari et al. 2007, Barbet 2012). Inferential tasks triggered *devoir* in similar contexts as the Tibetan copula *yin.gi.red*.

- ( *la dame, ça doit être sa petite maîtresse*  
3) 'The woman must be its little owner'
- (4) *mtsho='i steng-gi skye.dngos yin.gi.red*  
lake=GEN surface-GEN living things COP IMPF INFR EPI  
'They must be living things on the surface of a lake.'

*Il paraît* is often reduced to /paʁɛk/, and used as a proclitic encoding generic hearsay (Rossari 2012, Rodríguez Somolinos 2016), as in the book title:

- (  
5) *Paraît qu'c'est joli la vie d'Juliette* (Justine Davoine, 2010)  
'(They say) Juliette's life is lovely.'

Due to its partial grammaticalization, it is comparable to the Tibetan hearsay enclitic *-ze*.

- (6) *bu.mo de yag.po 'dug -ze*  
girl DEM nice COP IMPF DIR **-HSAY**  
'(They say) That girl is nice.'

Genuine examples from the contrastive corpus, as well as broader analyses based on larger corpora and acceptability tests will help us identify what specific formal, semantic, and pragmatic features make French evidentials different from their Tibetan equivalents. I will present further arguments against a definition of evidentiality that excludes most of the World's languages, by showing how French, like all Romance languages, has in fact developed (semi-)grammaticalized tools to render information sources.

#### ABBREVIATIONS

COP	copular verb
DEM	demonstrative
DIR	direct perception evidentiality
EPI	epistemic modality
GEN	genitive case
HSAY	hearsay evidentiality
IMPF	imperfective
INFR	inferential evidentiality
LV	light verb
QUOT	quotative

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## The Acquisition of Spanish Copula Verbs in 4-12-year-old Children

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Keywords: copulas, acquisition, Spanish, perspective-taking, context

Evidentiality in language serves to indicate the source of the information expressed in an utterance. Across languages, the acquisition of evidential morphological systems appears to occur late in development (de Villiers et al., 2009; Ozturk & Papafragou, 2016; Papafragou et al., 2007). This delay has been attributed to the protracted development of mental perspective-taking abilities (Birch et al., 2017; Ünal & Papafragou, 2016), which are necessary in order to identify and evaluate information sources. Despite the crucial role of evidential morphology to understand the relationship between linguistic and cognitive development, most studies have focused on the acquisition of evidential meaning in languages that express evidentiality via morphological means. In this talk, I will present data on the acquisition of evidential meaning in Spanish, specifically as encoded in copular sentences with *estar*. A number of studies on copula use across Spanish dialects have shown that production and comprehension of copulas verbs in adults is modulated by contextual information (Clements, 2006; Maienborn, 2005). Here, we investigate children's sensitivity to contextual cues across two tasks that require production and comprehension of copula verbs in a large cross-sectional developmental sample (n=142) of children aged 4-12. Specifically, we investigate the acquisition of copula uses, including evidential uses of *estar*, in Spanish-speaking children. Across tasks, we observe that children are sensitive to the contextual information preceding copula sentences. In addition, we observe both an over-use and an over-acceptability of *estar*, which occurs primarily in the youngest children. Finally, we report asymmetries in copula acquisition across production and comprehension tasks, which we discuss in the context of prior methodological and psycholinguistic proposals. Collectively, these results provide evidence for the crucial role of the context in copula acquisition and have implications for the acquisition of meaning that requires perspective-taking abilities and identification of information sources.

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## Evidential value of colloquial Spanish *igual*

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Keywords: evidentiality, adverb, Spanish, epistemic modality, evidential strategy

In some Spanish varieties, the adverb *igual* may be used in colloquial contexts wherein the speaker shows uncertainty towards his/her assertion *p*, when placed at the beginning of the clause. As such, its meaning contribution belongs to the domain of epistemic modality, by expressing speaker's attitude towards *p*, similarly to epistemic modals like *quizá* 'maybe', as shown in the context in (1) targeting possibility epistemic.

Context (adapted from vander Klok 2014): You are looking for your keys everywhere inside the house and cannot find them. So you say:

- (1) {*Igual están* / *quizá estén*} *en el coche.*  
 IGUAL PRES.IND.be.3PL                      maybe PRES.SUBJ.be.3PL                      in                      the                      car  
 ‘{Perhaps/Maybe} they are in the car.’

The two adverbs differ in several aspects though. Syntactically, preverbal *quizá* may trigger subjunctive mood on the verb, functioning as a parenthetical adverb (RAE-ASALE 2009:§25.14i-ss.); contrastingly, preverbal *igual* triggers the indicative. This contrast calls for an examination not only of the distinction between indicative and subjunctive mood, but also of the left periphery of the clause in line with Cinque (1999) and Speas & Tenny (2003). Within such framework, we hypothesize that *igual* occupies the head of an Evidential Phrase, in so conforming to its semantics. Semantically, *igual* is not only used to convey that the *p* it modifies is evaluated in view of what the speaker knows, but it also suggests recently acquired knowledge from some indirect evidence. In this sense, *igual* bears an evidential value. The context in (2), targeting weak necessity epistemic, easily allows for utterances

with *igual*, while *quizá* may be less accepted given that its use tentatively assumes that the speaker does not have as much readily available evidence.

Context: Pharmaceutical companies find a vaccine to cure the COVID-19 virus and distribute it among the population in Europe. Statistics show that at least 80% of those who get the vaccine are effectively cured. They agree to distribute the vaccine elsewhere, so you say:

- (2) {*Igual volvemos* / <sup>2</sup>*quizá volvemos*} a la  
 IGUAL PRES.IND.we.return maybe PRES.SUBJ.we.return to the  
*normalidad antes de lo que esperábamos.*  
 normality before of the that we.expected  
 ‘Perhaps we will return to normality before than we expected.’

We argue that the indicative triggered by *igual* somewhat manifests the speaker’s assertiveness and certainty about the truth value of *p*, in that the indicative mood has traditionally been associated with speaker’s commitment, while the subjunctive with *quizá* may follow from speaker’s uncertainty due to lack of said readily available evidence.

Following seminal works by Matthewson et al. (2007), McCready & Ogata (2007) or Wiemer (2018), a.o., we explore the undeniable overlap between epistemic modality and evidentiality by taking *igual* as a case study, which, to our knowledge, has gone unstudied hitherto. We propose it is an evidential strategy, as is assumed for non-evidential languages like Spanish (Aikhenvald 2004, González et al. 2016, a.o.). To this end, we analyze the syntax and semantics of this evidential strategy by depicting its analogous behaviour to evidentials and epistemic modals crosslinguistically.

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Evidential interpretations of Spanish uno vs. English one: evidence from parallel corpora

Elena Vilinbakhova  
<not updated>

## **From context-dependent evidential strategies to grammatical specialization: How the Romanian *conjectural future* becomes a *presumptive mood***

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Keywords: evidentiality, conjectural future, presumptive, grammaticalization, Romanian

The so-called *epistemic* or *conjectural future* – an evidential strategy consisting in the use of future verb forms to express inferences about the present or the past – is found in many languages (Italian, Romanian, French, Spanish, Greek, Bulgarian, English, German, etc., see Squartini 2001, 2005; Heine & Kuteva 2002: 142–143; Escandell-Vidal 2010). However, there is a great diversity of values and contexts in the uses of the conjectural future in these languages (for a contrast between French and Italian, see Rocci 2000, Squartini 2008; for a contrast between Spanish and Romanian, see Fălăuș & Laca 2014). The conjectural future is generally a context-dependent strategy (de Saussure 2012), and so was it in Romanian until relatively recent times, when some future forms have been partially grammaticalized (Iliescu 2000; Reinheimer-Rîpeanu 2000; Squartini 2005; Popescu 2009, Zafiu 2013). It is then possible to consider Romanian a language which morphologically codes evidentiality (in the restricted sense of Aikhenvald 2004, 2018).

This presentation aims to explain how this process took place, by reinterpreting the historical data, and to check (on the basis of oral and internet corpora) the balance between specialized and ambiguous future forms in present-day (standard and colloquial) Romanian.

The factors that contributed to the specialization of some Romanian future forms as evidential means are various, including the morphological abundance of variants and their sociolinguistic diversity. An important factor was the availability of several future periphrases; the preference of colloquial Romanian for the deictic use of newer forms made older forms available for evidential use. Register distinctions favoured the colloquial paradigm *o merge* vs. (high standard) *va merge* ‘(s)he will go’ as a better candidate for specialization. The scarce presence of a relative tense (the future perfect *o fi mers/va fi mers* ‘(s)he will have gone’) in current communication was another factor which allowed its use with an evidential value. The more obvious factor was the quasi complete disappearance of the progressive periphrases of old Romanian, whose survivors are only three forms – the subjunctive, the conditional and the future, parallel to the *irrealis* perfects. The loss of their aspectual value made them available for new values (due to the affinity between progressive, imperfective and epistemicity). The most frequent is the progressive future, the unique unambiguous form, completely converted into an inferential marker, used for inferences about the present (*va fi mergând/o fi mergând* – litt. ‘(s)he will be going’ = ‘(s)he probably goes’), and preferred for some semantic (non-static) verb classes. The conditional and subjunctive progressive periphrases (now very rare) are specialized for the hearsay evidentiality, and for few interrogative and mirative constructions respectively, sometimes equally labelled as forms of the presumptive mood (Irimia 2010).

Finally, I consider that the Romanian case has a larger theoretical relevance. It supports the idea that there is no clear-cut distinction, but merely a continuum, between languages that use only context-dependent strategies and languages with a grammatical coding of evidentiality, since it is possible to see the context-dependent strategies grammaticalized in a complex conjuncture of favourable factors.

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## Evidentiality in Herodotus' *Histories*: A first survey

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Keywords: Ancient Greek, Herodotus, evidentiality, polyfunctionality, subjectivity

Language typology has long focused on grammaticalized means to express evidentiality and related categories, including epistemic modality, mirativity, and deixis (Aikhenvald 2004: 195-215, 275-6, 2018). Recently, less grammaticalized context-dependent evidentials have also been given attention (Aikhenvald 2004:105-52, Wiemer 2010: 63, Squartini 2018).

Ancient IE languages, including Ancient Greek (AG), do not feature a proper system of evidentials but exploit a heterogeneous array of lexical means and grammatical constructions to suggest it. Accordingly, evidentiality has remained marginalized within IE studies (but see Joseph 2003 on PIE, Cuzzolin 2010, Guardamagna 2017, Napoli 2019 on Latin). For Plato's Attic, particles (1), complementizers (2), oblique optatives (3), and the auxiliaries *dokéō*, *éōika* (1), and *pháinomai* (4) have been assigned evidential values (examples from Van Rooy 2016). Studies devoted to each strategy in (1)-(4) have occasionally highlighted their evidential value (Denniston 1954, Rijksbaron 1976, Neunberger-Donath 1982, Bakker 1997, Méndez Dosuna 1999, Faure 2014, La Roi 2019; see also Luraghi 2020 on experiential predicates).

- (1) *pántes*            *ára*,    *hōs*    *éōiken*, *Athēnaíoi*    *kaloùs*            *kagathoùs*  
 INDF.NOM.PL    PTC    as    seem:PRF.3SG    A.:NOM.PL    noble:ACC.PL  
 and.good:ACC.PL  
*poiōúsi*            *plēn*            *emoú*  
 make:PRS.3PL    except.for    1SG.GEN  
 ‘**So, as it seems**, all Athenians make [the youths] excellent men, except for me.’ (Plat. 25a)
- (2) *egō*            *dè*    *toútōi*            *àn*    *dikaion*            *lógon*  
 1SG.NOM    PTC    3SG.DAT    PTC    just:ACC    speech:ACC  
*anteípoimi*            *hóti*    “*Ou kalôs légeis*”  
 answer:OPT.AOR.1SG    QUOT    NEG    well    speak:PRS.2SG  
 ‘But I would answer him with a just speech: “You don’t speak well, [...]”’ (Plat. 28b)
- (3) *kápeita*            *epeirómēn*            *autōi*            *deiknúnai*            *hóti*  
 nd.afterwards    try:IMPF.1SG.M/P    3SG.DAT    show:INF.PRS    that  
*oíoito*            *mèn*    *eínai*            *sophós...*  
 believe:OPT.PRS.3SG.M/P    PTC    be:INF.PRS    wise:NOM.SG  
 ‘And afterwards I tried to show him that he **thought** he was wise...’ (Plat. 21c)
- (4) *tôn*            *dokountōn*            *sophôn eínai*  
 DEF.GEN.PL    seem:PTCP.PRS.GEN.PL    wise:GEN.PL    be:INF.PRS  
 ‘...of those who are said to be wise, [...]’ (Plat. 21b)

This paper offers a first survey of how evidentiality is expressed in Herodotus’ *Histories*. This corpus has been chosen as Herodotus’ historical method is grounded on distinguishing different sources of information (Luraghi 2001: 142-3). Each source is a value of the category that linguists call evidentiality and, specifically, in Plungian’s (2010) terms:

<i>akoé</i>	‘hearsay’	reportative evidentiality
<i>gnómē</i>	‘argument’	inferential, presumptive, common knowledge evidentiality
<i>ópsis</i>	‘personal eyewitness’	sensory evidentiality

As information sources are granted such importance, Herodotus frequently makes explicit reference to them (e.g., Hdt. 1.123.1, 1.147.1, 2.29.1, etc.).

Building on Van Rooy (2016) and through a thorough scrutiny of the corpus, the following questions will be addressed: Which evidential strategies are employed in Herodotus’ Ionic dialect? Which values of evidentiality are expressed by means of them? Are these strategies distributed across

discrete sub-domains of evidentiality or do they occur in free variation? Are they polyfunctional? If so, which additional functions related to the speaker's subjectivity do they express? Furthermore, the Ionic evidentials will be compared with the Attic ones described in Van Rooy (2016). Finally, this paper is expected to show the importance of a traditionally neglected grammatical category to fully account for AG phenomena and to demonstrate how Herodotus' own voice can help linguists correctly interpret dead languages' pragmatic phenomena.

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## WORKSHOP 11

### **Experimental approaches to Romance morphosyntax**

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Keywords: Experimental linguistics, morphosyntax, Romance languages, comparative studies, language processing

In the last decades, addressing linguistic issues by experiments has become an established practice in linguistic research. Nonetheless, experiments are significantly more common in certain areas of linguistics and in the study of certain languages. In this workshop, we propose to focus on linguistic fields and languages that only more recently have seen a surge in experimental studies, namely morpho-syntactic features in Romance.

While researchers have been prolific in applying and adapting experimental approaches to some languages, others lag behind. Germanic languages, English and German in particular, feature a wide range of different experimental studies, whereas significantly less work has been done on Romance. This state of affairs can easily be verified by consulting the programmes of relevant international conferences like the annual CUNY Conferences on sentence processing, the biannual Tübingen conference series on Linguistic Evidence, or the Words in the World Project/2020 conference. Promising lines of publication, such as the contributions to Gess & Rubin (2004), are notable, yet unsustainable exceptions from the Romance perspective. However, especially in more recent years, Romance languages are making up ground, and several topics have been addressed from an experimental point of view, e.g. different aspects of pronoun resolution (Demestre et al. 1999, de la Fuente & Hemforth 2013), Differential Object Marking (Nieuwland et al. 2013, Wall 2015 and Wall et al. 2020a on Spanish; Zeugin on Catalan; Montrul 2019 on Spanish and Romanian), or Bare Nouns (Wall 2014, Beviláqua et al. 2016).

The aim of this workshop is to give visibility to these recent developments and to bring together the corresponding lines of research, deriving the greatest possible benefit of such a platform for researchers working on similar topics. Concentrating on Romance languages ensures a high degree of cross-linguistic comparability and transfer of insights, while at the same time offering a wide range of cross-linguistic variation of morpho-syntactic features to explore.

This workshop focuses on morphosyntax, an area where experimental methods have gained some ground in recent years, but are still far from being commonplace, compared to psycholinguistics or phonetics. In phonetics experimental approaches have a long-standing tradition (de Groot 1928, Fry 1954, Cohen 1962, to name some of the earlier works); however, psycholinguistics is commonly seen as the starting point of general experimental linguistics in the 1970s (Levelt 1970, Fodor et al. 1974). Although the main focus of psycholinguistics lies on processing and general cognitive mechanisms, the research questions revolve around the same linguistic phenomena we find in general linguistics (Hemforth 2013, Derwing & de Almeida 2009). The considerable amount of overlap allows using psycholinguistic methods in other areas of experimental linguistics (cf. Schütze 2011 or Featherston & Sternefeld 2007 for syntax, Noveck & Sperber 2004 for pragmatics).

Considering the wide range of experimental methods available (Derwing & de Almeida 2009), the most prevalent method in the domain of morphosyntax seems to be acceptability rating with

different types of Likert scales (Preston & Colman 2000), magnitude estimations (Bard et al. 1996, Featherston 2005), or other types of rating systems. Other frequently used experimental methods are different types of elicitation or production tasks, e.g. sentence completion, sentence production etc. (Eisenbeiss 2011, Wall et al. 2020b). Further methods include self-paced reading, EEGs or eye tracking. Often, studies apply several experimental methods (Bader & Häussler 2010) in order to approach a phenomenon from different angles and to gain more robust evidence (Schütze 2011). Combining experiments with other research methods like corpus studies or traditional interview techniques has also proven promising (e.g. Bresnan 2007, Gries 2003). We would like to discuss the potential and challenges of the different methods and combinations of methods based on specific morpho-syntactic features presented by the workshop participants.

As mentioned, Romance morphosyntax is a field with a huge potential for experimental approaches. Besides the lines of research already described, other examples of morpho-syntactic features analysed in recent studies are clitic doubling (von Heusinger & Tigau 2019 on Romanian), subject omission (Soares et al. 2020 on Portuguese), *leísmo* (Rodríguez-Ordóñez on Spanish and Basque), as well as morphological processing (Crepaldi et al. 2014 for Italian) and issues at the syntax-information structure interface (Abeillé & Winckel 2019). This is but a small selection of morpho-syntactic features that can be studied via experimental methods and is by no means intended as a limitation for possible workshop papers. We also strongly encourage papers analysing several languages or dialects via parallel or comparable experiments (e.g. Ionin et al. 2011, Wall et al. 2020a & 2020b), thus providing a more robust basis for cross-linguistic comparison.

The central aim of the workshop is to stimulate the use of experimental methods on morpho-syntactic features, especially in Romance languages, and to work towards establishing common practices and standards. We invite papers addressing one or several of the following questions:

- How can experimental methods inform linguistic theory?
- What are the advantages and best practices in the application of null hypothesis testing vs. exploratory data analysis?
- Are some methods more/less suited to the study of specific Romance morpho-syntactic features?
- What are the advantages of a combination of different experimental methods or of experimental and non-experimental methods?
- What is the potential of comparative/parallel studies applying experimental methods to several languages?

Possible topics include:

- Papers addressing one or several specific morpho-syntactic features
- Papers with a focus on one or several Romance languages (or Romance languages in contact with other languages)
- Papers combining different experimental methods or experimental and non-experimental methods in studying Romance morpho-syntactic features
- Experimental approaches with a comparative/variational focus
- Discussions of specific methodological aspects of experiments, e.g. experimental setup, Likert scales vs. magnitude estimation, different statistical analysis of experimental data etc.

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Gender agreement with coordinated nouns in French : an experimental approach

Aixiu An and Anne Abeill 

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An Experimental Investigation of Language Variation and Change in Mexican Spanish

Begoña Arechabaleta Regulez and Silvina Montrul

<not updated>

## **Lexical control in Spanish obligatory complement control constructions: examining the contrast between subject and object control verbs.**

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The grammar of control has been at the center of linguistic theorizing over the past decades. Here we present the results from two experiments conducted in Spanish which seek to determine the robustness of the control properties of a number of verbs identified in the literature as exhibiting either subject control (e.g. *prometer/promise*) or object control (e.g. *ordenar/order*). The constructions under investigation are illustrated in Table 1.

Regarding the contrast between subject and object control, some authors have noted that subject control verbs can coerce readings in which the canonical control relations are reverted (e.g. Dowty 1985; Rooryck 2000; Lyngfelt 2009). However, very little empirical evidence has been collected on the actual readings that speakers assign to control verbs. Furthermore, syntactically-based accounts of control that derive the interpretation of PRO from configurational principles, treated object control as the standard configuration, and subject control as a lexical exception (e.g. Rosenbaum's 1967 MDP; Chomsky & Lasnik's 1993 MLC). Against this background, it is predicted that comprehenders should be more efficient when computing object control dependencies and, thus, cases of subject control should exhibit reversed readings more often. We test this by means of the following experiments.

**Experiment 1** (n=105) uses a sentence completion task as a means to investigate the robustness of the control properties of 14 subject and 14 object control verbs. To this end, a group of native speakers were presented with sentences such as *John **promised/ordered** Mary to be\_\_\_\_\_* and were asked to complete the empty slot using an adjective. Thanks to the morphological properties of Spanish, the gender of the adjective used to complete the sentences allowed us to check the readings associated with the control verb in the matrix clause. The results reveal that participants strongly converge in completing the sentences with adjectives that agree in gender with the preferred controller. Preferred control readings were produced in more than 90% of the cases and no differences were observed between the two groups of verbs.

**Experiment 2** (n=41) uses an offline acceptability task in order to determine whether native speakers of Spanish are able to detect agreement violations that do not conform with the canonical control readings established in Experiment 1. This becomes evident in cases in which the embedded adjective does not agree in gender with the controller. We created 8 experimental conditions (see Table 1) using a 2x2x2 design which crossed the factors CONTROL (subject/object), GRAMMATICALITY (grammatical/ungrammatical), and DISTRACTOR (match/mismatch). The factor DISTRACTOR refers to the non-controlling NP. The results show that native speakers of Spanish clearly recognize grammatical violations, and no differences were observed between subject and object control sentences.

The fact that lexical control information appears to have a similar impact in the context of both subject and object control verbs provides support for lexico-semantic accounts that understand control as a lexical phenomenon that emanates from specific thematic/conceptual properties of verbs codified in their lexical representations. (e.g. Jackendoff & Culicover 2003; Sag & Pollard 1991 –but also cf. hybrid analyses such as Landau 2015). Under this assumption, it is expected that comprehenders

behave similarly in the context of subject and object control verbs, as it is observed in the offline tasks presented here. Nonetheless, our findings do not exclude the possibility of encountering differences in online experiments, which may not be attributed to the access and use of lexical control information per se but to other sentence processing mechanisms deployed during online comprehension (cf. Betancort et al. 2006; de-Dios-Flores et al. 2020; 2021).

**Table 1. Experimental materials for Experiment 2.**

Subject control		
Gram.	D. Match	María <sub>i</sub> <sup>fem</sup> le prometió <sub>j</sub> a Carmen <sub>j</sub> <sup>fem</sup> PRO <sub>i</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
	D. Mismatch	María <sub>i</sub> <sup>fem</sup> le prometió <sub>j</sub> a Manuel <sub>j</sub> <sup>masc</sup> PRO <sub>i</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
Ungr.	D. Match	José <sub>i</sub> <sup>masc</sup> le prometió <sub>j</sub> a Carmen <sub>j</sub> <sup>fem</sup> PRO <sub>i</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
	D. Mismatch	José <sub>i</sub> <sup>masc</sup> le prometió <sub>j</sub> a Manuel <sub>j</sub> <sup>masc</sup> PRO <sub>i</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
Object control		
Gram.	D. Match	María <sub>i</sub> <sup>fem</sup> le ordenó <sub>j</sub> a Carmen <sub>j</sub> <sup>fem</sup> PRO <sub>j</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
	D. Mismatch	José <sub>i</sub> <sup>masc</sup> le ordenó <sub>j</sub> a Carmen <sub>j</sub> <sup>fem</sup> PRO <sub>j</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
Ungr.	D. Match	María <sub>i</sub> <sup>fem</sup> le ordenó <sub>j</sub> a Manuel <sub>j</sub> <sup>masc</sup> PRO <sub>j</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.
	D. Mismatch	José <sub>i</sub> <sup>masc</sup> le ordenó <sub>j</sub> a Manuel <sub>j</sub> <sup>masc</sup> PRO <sub>j</sub> ser más <b>ordenada</b> <sup>fem</sup> con los apuntes.

*José/María promised/ordered Carmen/Manuel to be tidier with the notes*

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## Experimental Perspectives on Romance Prefix Verbs

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Keywords: Morphology, morphological processing, prefixation, verbs, Romance

Although French and Italian are part of the same language family, several studies have suggested that they have developed differently with regard to word formation strategies (Floricić, 2016; Rainer, 2008). This is especially true for verb formation: Corpus study results suggest that Italian does not only have more productive verbal affixes than French, there is also evidence pointing to speakers of Italian making greater use of them than speakers of French (Frenguelli, 2010). This difference in usage can be observed on the basis of corpus data, however experiments probing the representation of complex words in the mental lexicon are necessary to fully understand it.

The present study sets out to explore how descriptive linguistic accounts of word formation in French and Italian can be combined with psycholinguistic experiments to better understand verb formation through prefixation in French and Italian (Iacobini, 2004; Lefer, 2012). Such a comparison is necessary in light of previous experimental studies for English and German, which have shown that morphological processing can differ even between related languages and that these differences can in turn affect how morphological processes are used (cf. Marslen-Wilson et al., 1994; Rastle et al., 2000; Smolka et al., 2018).

In order to verify if such differences exist between French and Italian, two online priming experiments based on a lexical decision task (Taft & Forster, 1975) are carried out on the basis of the Lexique 3.0 (New et al., 2004) and Subtlex-It (Crepaldi et al., 2015) databases. The experiments will demonstrate whether speakers access the word-stem or the whole word when confronted with prefixed verbs. We measure the effect of prior presentation of prefixed verbs to base verbs on the recognition of the base verbs, as exemplified in (1) for each language respectively.

- (1) a. (fr.) *surnommer* ‘to nickname’ – *nommer* ‘to name’  
b. (it.) *richiedere* ‘to ask again’ – *chiedere* ‘to ask’

The study design takes into account the semantic and morpho-orthographic relationship between the base-verb and the derivate, using prime and target pairs with form-related semantically transparent, semantically opaque and unrelated prefix verbs, as exemplified in (2a-c) for the French base verb *mettre*, taking into account verb- and affix frequencies.

- (2) a. (fr.) *remettre* ‘to put back’ – *mettre* ‘to put’  
b. (fr.) *commettre* ‘to commit’ – *mettre* ‘to put’  
c. (fr.) *déformer* ‘to distort’ – *mettre* ‘to put’

By measuring whether priming effects occur, we aim to uncover whether prefix verbs are decomposed or accessed as whole words by speakers of French and Italian, respectively. A comparison of the two experiments will help to understand if there are differences in morphological processing and what may

cause these differences. Looking into how prefixed verbs are processed by speakers of French and Italian in this manner will ultimately give us new insights into which factors govern lexical retrieval and storage in the mental lexicon, which can in turn motivate the usage patterns observed in descriptive studies.

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## Experimental methods for language variation and change in Spanish

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Keywords: Spanish, Imperfective, Variation, Change, Experimental

Variation within the Spanish Imperfective domain partially responds to the *Progressive-to-Imperfective* diachronic shift (Dahl 1985, Bybee et al. 1994). Spanish had only one imperfective marker (the Present (PRES)) that expressed both *habitual* and *event-in-progress* readings, until it developed a Present Progressive (PROG) to express the *event-in-progress* reading (**emergence**). Over time, these markers became restricted to mutually exclusive readings (**categorization**): PRES for *habituals*; PROG for *events-in-progress*. This stage should last until PROG gets reanalyzed as an imperfectivity marker (**generalization**), becoming the only device to express both readings (Deo 2015).

Through **acceptability judgments** (n=232) across different Spanish dialects (Central Peninsular, Mexican Altiplano, and Rioplatense), I show that these stages are not clear-cut: Spanish is between **categorization** and **generalization**. Some *specific contexts* allow PRES to still express an *event-in-progress*, and other *specific contexts* allow PROG to already express a *habitual*. Specifically, in Study 1, I show that PRES can convey an *event-in-progress* only when speaker and hearer **share perceptual access** to the relevant event (Rich Contexts). Conversely, PROG can be used regardless of the kind of contextual information (Rich and Poor Contexts). In Study 2, on the other hand, I show that while PRES can convey a *habitual* in any communicative situation (Neutral and Supporting Contexts), PROG can only do so when the presupposition associated with its auxiliary verb, *estar* –which requires the construal of alternative situations at which the proposition does not hold (e.g., Sánchez Alonso et al. 2017)– is satisfied by context (Supporting Contexts). Figure 1 below shows participants' ratings across the three Spanish dialects for both markers (and a baseline condition with the Simple Past marker) when conveying an *event-in-progress* reading. Figure 2, conversely, shows participants' ratings in the same dialectal varieties for the same markers in the expression of the *habitual* reading.

Two Self-Paced-Reading studies (n=300) also show that these contextual modulations are observable during **real-time comprehension**, following expected patterns: less acceptable context-marker combinations produce longer reading times than more acceptable ones.

As the figures show, these constraints are at play in different ways across the different dialectal varieties. In the case of the *event-in-progress* reading, we see that when shared perceptual access is provided by the context, PRES is acceptable in Rioplatense and Central Peninsular Spanish, but in Mexican Altiplano Spanish participants only accept PROG. For the *habitual* reading, when context satisfies the presuppositional component of the auxiliary verb, PROG can be used in Rioplatense and Central Peninsular Spanish, while in Mexican Altiplano Spanish, PROG is no longer dependent on contextual support. This pattern is consistent with a **generalization** process already underway in the three varieties, with the Mexican variety further along the grammaticalization path from Progressive to Imperfective. Altogether, these cross-dialectal patterns are consistent with a model of variation and change **visible through offline and online experimental methods**, and subject to identifiable contextual factors.

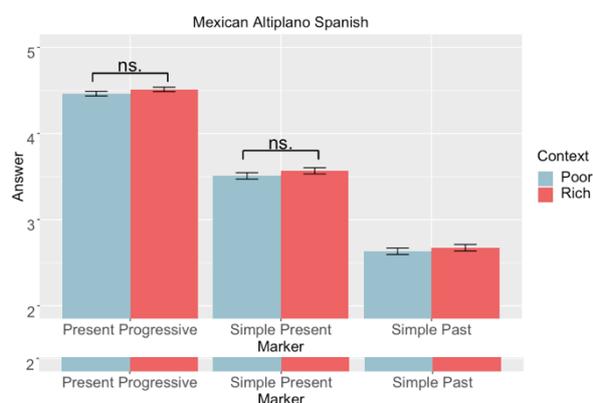
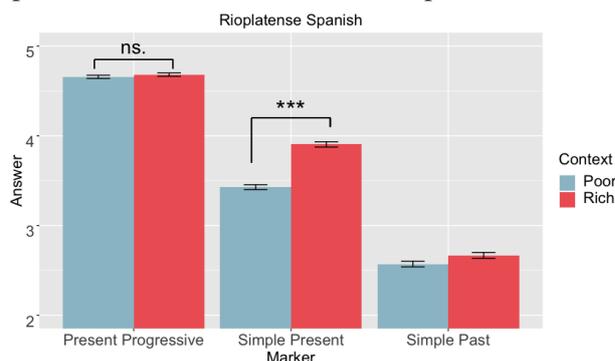
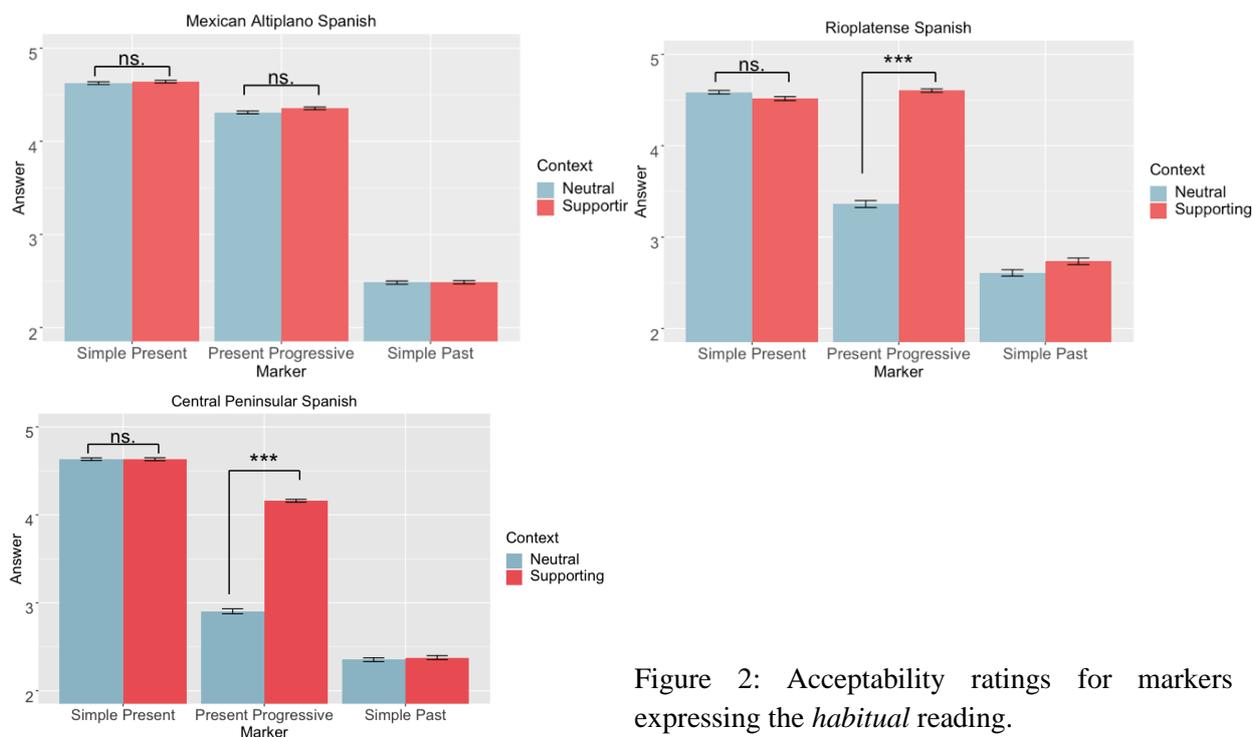


Figure 1: Acceptability ratings for markers expressing the *event-in-progress* reading.Figure 2: Acceptability ratings for markers expressing the *habitual* reading.

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## Investigating the interpretation of null and overt pronouns in Spanish by means of a graded judgement task and a sentence continuation task

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Keywords: reference; pronoun interpretation; anaphora; coherence; discourse.

Null subject languages show quite an assorted outcome regarding the use and interpretation of null and overt pronouns (Filiaci et al. 2013; Torregrossa et al. 2020).

Elaborating on a recent proposal by Rizzi (2018), which defines prominence of sentence constituents in terms of c-command, it is suggested that the higher a subject is in the clausal structure, the more prominent it is for anaphora resolution. To test this hypothesis for Italian and Spanish, we ran an offline interpretation task, in which participants had to indicate the extent to which they interpreted a NS vs. overt subject pronoun (PRON) as referring to a subject or an object antecedent, based on a 5-point Likert scale. The results showed that while in Italian null subjects have a strong subject-antecedent bias (and overt pronouns an object bias), in Spanish, neither null nor overt pronouns are associated with any antecedent bias.

We then analysed how the above-mentioned absence of antecedent-bias interacts with discourse relations and, in particular, with the subject/object bias imposed by implicit causality verbs, such as “impress” (with a strong subject bias -NP1) and “admire” (with an object bias -NP2) in Spanish. Following Kehler & Rohde (2013), we created a sentence continuation task, in four different conditions, using both subject and object-biased verbs, to understand how participants interpret referring expressions:

- (1) a. Juan ha impresionado a Carlos. \_\_\_\_\_ (blank)
- b. Juan ha impresionado a Carlos. Ha \_\_\_\_\_ (null subject)
- c. Juan ha impresionado a Carlos. Él ha \_\_\_\_\_ (overt pron)
- d. Juan ha impresionado a Carlos. Le ha \_\_\_\_\_ (clitic)

A second experiment added a more complex discourse dimension: Sentence (1) – in all four conditions – was preceded by a sentence which established a referent as discourse topic:

(2) Juan/Carlos es adolescente y le encanta ir a fiestas. Muchos adolescentes van a fiestas en discotecas.

The results showed that the lexical meaning of IC-verbs as well as the discursive coherence relations play a fundamental role in the use and interpretation of null and overt subjects in Spanish.

The NP1 results showed a clear tendency for both nulls and overts to refer to the subject, which means that the lexical meaning and bias of the verb is very strong. The lexical meaning has been found to override other factors also in terms of coherence relations.

The NP2 results showed a significantly higher reference to the object, particularly with overts, which are very high for explanations, in terms of coherence relations, as well as null objects (which increased significantly compared to the NP1 results). Interestingly, nulls referring to the subject antecedent were also quite high, but were always used in elaborations. This is because the conceptual “meaning” of the elaboration makes it easier for the subject to continue as a null, since the new sentence is exactly that, a continuation.

Although the results from Experiments 2 and 3 are consistent, from a grammatical point of view, with the previous ones from Experiment 1, the analysis shows how decisive and important semantic and discursive factors are in order to understand the speakers’ preferences.

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Differential Object Marking and agentivity in Sicilian and Catalan. Evidence from an acceptability judgement study

Sophie Mürmann  
<not updated>

## **Combining elicitation tasks and acceptability judgments in search of infrequent structures: A case study in Differential Marking of inanimate-reference objects in Spanish**

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Keywords: experimental methods, Spanish, Differential Object Marking, transitivity, variation

Differential Object Marking (Bossong 1985, henceforth: DOM) is a split in the morpho-syntactic marking of direct objects based on scalar effects. In Spanish, this split is traditionally ascribed to the feature of animacy combined with definiteness. For instance, with the verb *amar* ‘to love’, marking is mandatory with human-reference objects (1a), but ungrammatical with those referring to inanimates (1b):

- (1) a. Juan ama \*(a) María                    ‘Juan loves Maria.’  
b. Juan ama (\*a) su coche.                ‘Juan loves his car.’

However, recent studies have challenged a widespread overgeneralization according to which inanimate-reference objects cannot be marked in general. In fact, the presence of the marker is at least acceptable in sentences like the following:

- (2) He logrado vencer (a) las fuerzas ocultas.            ‘I have managed to defeat the dark forces.’  
(3) El bolígrafo sustituyó {el/al} lápiz.            ‘The pen replaced the pencil.’  
(4) Consideraron empresa pionera (a) una fábrica.  
          ‘They considered a factory as a pioneering company.’

It has also been claimed that inanimate-reference DOM shows a higher prevalence and acceptability at certain historical stages (Laca 2006) or in certain dialects of Spanish (Company Company 2002, von Heusinger & Kaiser 2005, Tippets 2011). However, the evidence presented for these claims is sometimes weak or even contradictory. This stems from two major methodological flaws: First, they are all too often based on very few or even single corpus examples. Second, the compared examples are heterogeneous. For instance, example (4) above has a double direct object and is thus more complex and ambiguous in comparison to (3), in which the transitive nature between subject and object is, in turn, very different from (2).

In our talk, we shall argue that an approach involving multiple carefully adapted experimental methods is most promising for shedding light on this controversial issue. We will present a database consisting of 7080 elicited sentences, 5040 acceptability judgments and 168 metalinguistic interviews compiled in four urban centres of the Hispanic World (Madrid, Mexico City, Lima and Montevideo).

This combination of methods is necessary because it allows to compensate the disadvantages of the individual approach: Production experiments yield reliable data due to relatively spontaneous speech, but a disadvantage with regard to DOM is that the results per item will be binary by nature, since the marker can only be either absent or present. Acceptability studies, on the other hand, allow for a differentiated evaluation of individual stimuli if gradient judgments are implemented, albeit at the cost of a less natural experimental environment.

We will show that while both methods give significant insights on the functioning of inanimate-reference object marking in the four urban varieties on their own, the results gained with one method help interpreting the outcome of the other one. Unexpected contrasts in less acceptable sentences in some varieties are mirrored in higher production rates in elicitation in the same groups of speakers. Conversely, gradient judgments can be used to explain variation in the production data.

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## **Affectedness and Differential Object Marking in Spanish: A double perspective study**

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Keywords: affectedness, diachronic corpus analysis, Differential Object Marking, forced-choice questionnaire, Spanish

Differential Object Marking (DOM) depends in Spanish not only on nominal features of the direct object, such as animacy and definiteness (Aissen 2003; Company Company 2002; Laca 2006), but also on certain properties derived from the semantics of the verb, such as affectedness, agentivity, and telicity (García García 2014; von Heusinger 2008; Torrego 1999). With regard to affectedness, it has been claimed that affected human direct objects receive DOM, unlike non-affected ones, which lack it (Torrego 1999:1791). The main problem derived from this observation is that it is based on a reduced number of examples. Moreover, there are no quantitative studies of this topic from a synchronic point

of view so far and the empirical approaches have been very scarce from a diachronic perspective (von Heusinger 2008; von Heusinger & Kaiser 2011).

The aim of this paper is to empirically investigate the influence of affectedness on DOM both from a synchronic and a diachronic perspective. For this purpose, I conducted two studies based on different, but at the same time complementary methodologies: on the one hand, a diachronic corpus analysis to study previous stages of Spanish and, on the other hand, a forced choice questionnaire to address the synchronic perspective.

The corpus study is based on 3200 tokens collected from the *CDH (Corpus del Diccionario Histórico)* and covers the fourteenth, sixteenth and twentieth centuries. I have included definiteness as an independent variable, in addition to affectedness, since DOM first extended through the definite NPs in its early stages.

With regard to the questionnaire, it comprises a set of 48 transitive sentences (32 critical items and 16 fillers) where the participants had to choose between the marked or non-marked direct object. Half of the critical items contain a verb that implies affectedness in its object, while the rest does not imply affectedness. In contrast to the corpus study, all the direct objects are indefinite NPs since DOM currently appears with almost all definite NPs. The questionnaire was completed by 326 native speakers of European Spanish.

The results of both studies consistently show that affectedness has a clear effect on the occurrence of DOM, not only in modern Spanish, but also in previous historical stages.

The combination of the two methods described above has shown several advantages. On the one hand, corpus analysis allows the study of the phenomenon in real production contexts that the researcher has not manipulated. However, due to the many constraints that the object of study involves, it is difficult to find tokens that fit exactly the needs of the research. On the other hand, the forced choice questionnaire allows the study of DOM in controlled contexts, although participants are sometimes forced to express their intuition about structures they would not normally produce.

The combination of both methods, whose advantages and disadvantages are complementary in many cases, has made it possible to obtain a fairly broad vision of the impact of affectedness on DOM.

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## **Romanian direct object marking and discourse prominence – Experimental evidence from a paragraph continuation task**

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Keywords: Differential Object Marking, Clitic Doubling, discourse prominence, direct object, indefinites

This paper investigates the discourse properties of indefinite direct objects (DOs) under different marking types: a) differentially marked (DOMed) DOs, b) DOMed and Clitic Doubled (CDed) DOs and c) their unmarked counterparts. We hypothesize that CDed+DOMed DOs exhibit higher discourse prominence than unmarked DOs and that CD and DOM independently contribute to discourse prominence. We propose the following prominence scale, also building on Chiriacescu & von Heusinger (2010) and Tigău (2011), who show that DOMed indefinites show a higher discourse prominence than unmarked indefinites:

### **(1) CDed+DOMed indef >DOMed indef >unmarked indef**

To test this hypothesis, we conducted a paragraph continuation task with 24 test items (+12 filler/control items), consisting of contexts with two sentences each, (2): the first sentence provided a general frame and the second sentence consisted of a transitive verb, a proper name in subject position and a descriptive noun in DO position.

(2) Sentence 1      Petrecerea      din apartament era      în toi.  
Party.the      in apartment was      in      full swing  
'The party in the apartment was in full swing.'

Sentence 2      a. Oscar observă **un arhitect** în cadrul ușii.  
Oscar noticed an architect in doorway.  
b. Oscar observă **pe un arhitect** în cadrul ușii.  
Oscar noticed DOM an architect in doorway.  
c. Oscar **îl** observă **pe un arhitect** în cadrul ușii.  
Oscar CL.3p.sg noticed DOM an architect in doorway.  
d. Oscar **îl** observă **pe arhitect** în cadrul ușii.  
Oscar CL.3p.sg noticed DOM architect in doorway.

We employed the DO in four conditions: a) unmarked indefinite, b) DOMed indefinite, c) CD+DOMed indefinite, and d) CD+DOMed definite and created 4 lists (Latin Square). 85 native speakers of Romanian participated in the experiments for course credit. They had to continue the discourse by one sentence only. We annotated all produced sentence (2040) for antecedent (Ref1=subject vs Ref2=object) and for the type of referential expression (null, personal pronoun, demonstrative, definite NP). Following Givón (1983), we measured discourse prominence by i) the

amount of referential uptake of Ref2 (*choice of reference*) and by ii) the type of the referential form (*choice of referential form*).

Overall results show: First, Ref1 (=subject) was more often picked up in the continuation sentences than Ref2 (=DO), which corresponds to the generally assumed bias towards the subject. Second, CD+DOMed DOs are more often used in the continuation sentence than less marked forms, confirming the prominence scale above. Third, the analysis of referential form shows that CD+DOM indefinites are more often picked up with personal pronouns, and less often with definite NPs, while we found the reverse pattern for DOMed indefinites. Unmarked indefinites showed less demonstratives than the other forms. Summarizing, we can say that DOM systematically contributes to discourse prominence, and that CD has an additional effect in increasing raise the prominence of the respective DOs.

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## **Core issues in the field of experimental morphology Stimuli selection: frequency and other criteria**

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Keywords: lexical processing, morphological processing; experimental morphology; Portuguese data; frequency

Experimental morphology deals with word processing from a linguistic point of view. Such claim has theoretical and methodological implications. Psycholinguistic approaches to word processing are overall concerned with lexical access, and whether the identification of a positive match in the lexicon targets each word in its entirety, the computation of the word constituents, or a mix of both. However, the choice between looking at word processing as the output of a direct access to the lexicon, as an analytical operation over roots and affixes, or as the combination of both, relies on the assumption that all words are similar, provided that length and frequency are controlled, which is obviously untrue.

In fact, word processing operates differently on different kinds of words, namely complex compositional and lexicalized words (cf. Pinto 2017). Furthermore, length and frequency are also problematic factors. Length is intimately related to morphological complexity and frequency values may be quite misleading (cf. Villalva & Pinto, 2020).

In this talk, I will mainly address the issue of word frequency, taking into account data from Portuguese, but the discussion transcends the specific domain of this or other Romance language. Based on textual corpora, frequency values tend to reflect the status of words in written, literary or formal language registers, not necessarily strictly contemporary. Thus, they are unsuited to test other domains, such as child language (cf. 1) or marginal word formation processes, such as blending (cf. 2):

- |     |                                |                |
|-----|--------------------------------|----------------|
| (1) | <i>carinha</i> ‘little face’   | 2.980_tokens   |
|     | <i>cara</i> ‘face’             | 133.014_tokens |
|     | <i>dedinho</i> ‘little finger’ | 373_tokens     |
|     | <i>dedo</i> ‘finger’           | 19.984_tokens  |
| (2) | <i>aminimigo</i> ‘frenemy’     | 2_tokens       |
|     | <i>abreijo</i> ‘hug+kiss’      | 5_tokens       |

In fact, even the corpus NOW, that covers a very recent time period (2012-2019) confirms that evaluative words or blends are very low frequency words, which is a problem if the goal is to study these kinds of words. Furthermore, frequency values are often disturbed by lexical issues. The presence of a word in a given collocation potentiates its frequency, but the word loses its intrinsic semantic value, and therefore the frequency value should shift to another lexeme:

- |     |   |               |
|-----|---|---------------|
| (3) | <i>renovável</i> ‘renewable (singular)’       | 5.881_tokens  |
|     | <i>renováveis</i> ‘renewable (plural)’        | 18.143_tokens |
|     | <i>energias renováveis</i> ‘renewable energy’ | 5.967_tokens  |

Polysemy is more problematic, because it is less traceable. The four available meanings for *laranja* are blended in the frequency values of the singular and plural forms. Without a morphosemantic annotation, the frequency values of each meaning remain unknown:

- |     |                           |               |
|-----|---------------------------|---------------|
| (4) | <i>laranja</i> ‘orange’   | 24.221_tokens |
|     | <i>laranjas</i> ‘oranges’ | 5.542_tokens  |
- a. *30 milhões de caixas de laranjas tardias* (fruit)
  - b. *frutos e legumes com [...] muita cor (vermelhos, amarelos, laranjas)* (colour)
  - c. *todos os partidos estiveram muito mal “, incluído os laranjas* (members of a political party, in EP)
  - d. *apreensão de bens em nome de terceiros, conhecidos como laranjas* (figurehead, in BP)

Frequency values should not be entirely discarded, but different measurements must be identified in order to obtain a finer control of the stimuli. Experiments involving off-line and online tasks were recently developed in the framework of The Word Lab ([www.talktothewordlab.com](http://www.talktothewordlab.com)), and the results suggest that they should be further discussed.

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## Differential Object Marking and discourse prominence in Spanish

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Keywords: Differential Object Marking, discourse prominence, direct object, anaphora, topic shift

In Spanish, human, indefinite direct objects may receive Differential Object Marking (DOM). The literature has proposed different explanations in order to capture this variation (Fábregas 2013), including the hypothesis that DOM is triggered by topicality (see e.g. Leonetti 2004, Iemmolo 2010). On the basis of this hypothesis, we can expect direct objects with DOM to be more discourse prominent and, thus, to be re-used more frequently in the following discourse than direct objects without DOM, as previously shown for Romanian (Chiriacescu & von Heusinger 2010). In this presentation, we hypothesize that this holds also true for Spanish, i.e. we assume that human indefinite direct objects with DOM are taken up more frequently in the following discourse than those without DOM.

In order to test this hypothesis, we conducted two online paragraph continuation experiments consisting of 24 test items. We manipulated the differential object marking of the indefinite direct object, as in (1), and distributed the critical items over two lists (12 critical items with DOM, 12 without DOM, and 12 filler / control items). Participants were asked to add a continuation sentence to each test item. We first launched a pretest with 10 participants, and then distributed the experiment via Prolific to 50 participants. Both tests were restricted to speakers from European Spanish. We annotated all produced sentences (Exp. 1: 240; Exp. 2: 1200) for the two relevant antecedents (Ref1 = subject vs. Ref2 = direct object) and measured discourse prominence by the frequency of referential uptakes of Ref1 and Ref2.

- (1) Ana oyó (a) un bebé en el piso de al lado.  
'Ana heard (DOM) a baby in the apartment next door.'

The experiments show the following results: (i) In Exp. 1 the subject was more often picked up in the continuation sentences than Ref2 (= direct object); this was expected due to the generally assumed bias towards the subject, but it was not the case in Exp. 2. (ii) Overall, there was no effect of DOM with respect to the frequency of Ref2 in the continuation sentence (against our prediction). However, we found (iii) an effect of DOM in intransitive continuation sentences where only one referent was taken up. In these cases, Ref2 with DOM were better competitors to Ref1 than Ref2 without DOM, as illustrated in Table 1.

Table 1: Occurrence of Ref1 and Ref2 in intransitive continuation sentences

Intr. Sentences	Exp1 (N = 123)		Exp2 (N = 352)	
	Ref1	Ref2	Ref1	Ref2
DOM	24% (16)	76% (51)	26% (62)	74% (177)
no DOM	46% (25)	55% (31)	32% (81)	68% (175)

Thus, our results suggest that in Spanish, DOM enhances the discourse prominence of the direct object. This is reflected in the more frequent referential uptakes of the corresponding arguments, which, surprisingly, were only visible in intransitive continuation sentences. We will conclude our presentation with a discussion on the difference between intransitive and transitive continuation sentences and why they influence referential uptake.

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## An experimental analysis of the variable use of *il* in finite impersonal constructions in modern spoken French

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Keywords: Acceptability study, spoken French, impersonal constructions, *il*-drop, experimental data

The paper presented here discusses a specific morpho-syntactic feature of contemporary spoken French which is the omission of the element *il* in finite impersonal constructions, addressed from an experimental point of view. Even though modern French does not allow, apart from a limited set of exceptions, the omission of subject pronouns, we can frequently observe the absence of the expletive subject pronoun *il* in finite impersonal constructions such as *y avoir* ‘exist’, *falloir* ‘must’ and *paraître* ‘seem’ in modern spoken French (Culbertson & Legendre 2014, Zimmermann & Kaiser 2014, Grevisse & Goosse 2016:§235):

(Il) faut y aller. (Auger 1993:179)  
(it) must there go  
‘One must go there.’

This paper presents the results of an acceptability study based on judgements made by 389 native speakers of French from France. The study verifies several characteristics attributed to the omission of *il*, examining the effect of the sentence type, the presence of a fronted adverb, different impersonal verbs and sociolinguistic factors. The experiment consists of three practice sentences, 24 filler sentences and 24 experimental items including eight sentences each, resulting from eight different conditions. The stimuli are presented orally in order to set a spoken register. In addition, participants are instructed to rate the sentences corresponding to spoken language in an informal setting.

It is to be noted that the acceptability judgement task builds on a corpus study conducted on this topic by Widera (2021), thus combining the two different empirical methods. Therefore, this talk will

also deal with the potentials and challenges of each approach and discuss the benefits of combining both. A major advantage of acceptability judgement tasks over corpus studies lies in the fact that they can provide judgements on rarely produced constructions and that different factors can be systematically contrasted (see Schütze & Sprouse 2013, and Schütze 2016).

Altogether, the analysis of the data shows that sentences with *il* drop receive lower acceptability judgements and show greater inter-speaker variation in comparison to the same sentences with *il* realized. More precisely, it reveals, among others, a particularly low acceptability when *il* is omitted in subordinate sentences, especially in the absence of a fronted adverb.

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## Differential Object Marking and language contact: An experimental study of Spanish and Romanian

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Keywords: Differential Object Marking, acceptability judgement task, elicitation, bilingualism, Romance languages

Experimental approaches are frequently applied to study language contact situations and to examine the behaviour of heritage speakers (Polinsky 2018). Most experimental studies of Differential Object Marking (DOM) in contact situations focus on how the grammar of heritage speakers of DOM languages is affected by languages without DOM (Montrul et al. 2015). However, little research has been done on contexts where both languages share this feature but differ concerning its specific configuration. This study analyses Spanish and Romanian DOM, focussing on the contact situation of Romanian immigrants in Madrid, through a series of linguistic experiments.

DOM has been characterised (e.g. by Bossong 1985) as a way of differentiating between certain types of direct objects, which depends on a series of scalar factors and manifests in the form of a

morpho-syntactic marker (i.e. Spanish *a* and Romanian *pe*). Although DOM has multiple scalar dimensions, animacy and definiteness are often cited as the two main governing features (cf. von Heusinger/Kaiser 2005 and Aissen 2003):

Animacy scale: human > animate > inanimate

Definiteness scale: pronoun > proper name > definite NP > specific NP > nonspecific NP

While the cut-off points for the basic DOM configuration in Spanish and Romanian are at similar levels (i.e. [+human]~[-human] and [+specific]~[-specific]), in some areas the two languages differ considerably. In each language one of the main parameters is slightly dominant, as is usually the case in two-dimensional DOM systems (Aissen 2003). Whereas in Spanish, animacy is more dominant, specificity seems to have slightly more influence in Romanian. The effect of these differing dominance patterns is reflected, e.g., in the behaviour of relative pronouns (sp. *que*, ro. *care*, ‘that’) and certain quantifiers (sp. *todos*, ro. *toți*, ‘all’). In Spanish these elements can only be *a*-marked when they have a human referent, whereas in Romanian both human and inanimate referents are *pe*-marked (cf. Sanda 2002). Another context where Spanish and Romanian DOM differ is human direct objects in definite noun phrases without further descriptive elements. While Spanish marks these objects obligatorily, standard Romanian does not allow the use of DOM (sp. *El chico vio al profesor*, ro. *Băiatul a văzut Ț profesorul*, ‘The boy saw the professor’).

The experiments presented in this talk focus on two areas. First, the core system of DOM generally characterized by the two scales, and, second, some of the contexts of divergence, that might highlight cross-linguistic influences in the behaviour of bilingual speakers. This on-going study combines several experimental methods to compare DOM in Spanish and Romanian in general, and in Romanian-Spanish bilinguals in Madrid in particular. The experiments consist of two acceptability ratings and different elicitation tasks, all of which follow the Latin Square method for fully crossed factorial within-subject designs. The participants are divided into three groups, one each of native Spanish and Romanian speakers and one of bilingual Romanian speakers in Madrid. The monolinguals are shown each experiment only in their native language, whereas the bilingual speakers solve each task in Spanish and Romanian.

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<b>WORKSHOP 12</b>
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## Iconicity in prosaic lexicon

Ian Joo

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Keywords: iconicity, vocabulary, sound symbolism, phonosemantics, language change

Are prosaic (non-ideophonic) words in spoken languages also iconic? Recent progress in research has shown iconicity to be a pervasive character in prosaic words as well. Patterns of iconicity can be found in words denoting speech organs (Urban 2011), spatial deixis (Johansson and Zlatev 2013), persons (Nichols and Peterson 1996), and other basic meanings (Blasi et al. 2016; Joo 2020; Johansson, Anikin, et al. 2020). It is now evident that a language do not divide its vocabulary into iconic and non-iconic words: Prosaic words may be less iconic than ideophones, but they are certainly not void of iconicity.

**To what degree and in what manner are prosaic words iconic?** The English noun *breast* is iconic in the sense that it bears the [+labial] phoneme *b*, thus sharing the universal tendency of morphemes meaning ‘breast’ bearing [+labial] phonemes (Joo 2020) and reflecting the perceptual association between bilabial sounds and softness (Sakamoto and Watanabe 2018). The noun *breast*, however, is not fully iconic, since we are not aware of any iconic motivation behind the remaining phonological features represented by this word (such as its consonant *t*) and must thus judge them to be arbitrarily assigned to the lexical meaning of ‘breast’, at least at the synchronic level. Thus, iconicity is a continuous character and a lexeme may be iconic to different degrees, often only subtly so. It is this continuum of iconicity in the prosaic lexical stratum that merits further investigation.

**How does the iconicity of prosaic words influence language change?** Lexical iconicity can motivate language change. This is not surprising, since biased synchronic phonosemantic association implies biased diachronic change. That is, if the words meaning ‘breast’ tend to have [+labial] phonemes, then there must have been diachronic mechanisms where such a phonosemantic pairing was favored. Several hypotheses (not mutually exclusive) have aimed to explain such mechanisms, such as the iconic treadmill (constant coinage of new iconic words following the de-iconization of existing iconic words) (Flaksman 2017), phonosemantic inertia (resistance to regular sound change in order to preserve iconicity) (Flaksman 2013), the rebuilding of iconicity (morphosemantic rearrangement of lexemes to build iconic schemata) (Johansson and Carling 2015), and remotivation (iconicity-motivated semantic reanalysis of existing lexemes) (Benczes 2020). Even though the iconicity of the prosaic lexicon has been so far clearly observed at the synchronic surface, what diachronic processes lead to its emergence remains relatively unclear.

**How does iconicity in prosaic words influence speech perception and production?** If many of the words we use are iconic, then what purpose does their iconicity serve? Some works have argued that ideophones help early language acquisition (Imai, Kita, et al. 2008; Imai and Kita 2014). As mentioned, iconicity is not a feature categorically reserved for ideophones but rather gradually (albeit unevenly) distributed throughout the ideophonic and prosaic strata. Thus, iconicity in prosaic lexicon may help L1 acquisition as well. Further research is needed to investigate whether prosaic lexical iconicity brings cognitive advantages other than acquisitional benefits.

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## Are German Pokémon Names Sound-Symbolic?

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Keywords: sound symbolism, iconicity, cross-modal correspondence, language-specific

At least since the beginning of the 20th century (e.g., Wells 1919, Sapir 1929, Newman 1933), researchers have been absorbed with sound symbolism – a correspondence between certain sounds and

particular meanings or characteristics (Hinton et al. 1994). Recent research reveals that the potential of sound symbolism is widely present in fictional character names. This study follows the interest in sound symbolism within the Pokémon universe.

In a 2018 study, Kawahara et al. examined the effect of voiced obstruents, the number of moras, and vowel quality on Pokémon attributes *height*, *weight*, *strength*, and *evolution*. The authors found positive correlations among all or almost all Pokémon characteristics with the number of voiced obstruents and the number of moras. Subsequent research extended Kawahara et al.'s (2018) findings onto further languages. Shih et al. (2019) revealed cross-linguistic differences and similarities in sound symbolism, for example, how mora, syllable, or segment counts are used similarly to signal Pokémon evolution stage across those languages.

The current study aims to shed light on the sound symbolic nature of German Pokémon names. The hypotheses are based on previous findings by Kawahara et al. (2018) and Shih et al. (2019). First-generation Pokémon names were used in the analysis (N = 151). To determine the relationships between Pokémon attributes and linguistic features, a conservative two-step analysis with Bayes Factor correlations and Bayesian hierarchical models was used.

Different from the languages investigated by Kawahara et al. (2018) and Shih et al. (2019), the results reveal only a few sound-symbolic relationships in German Pokémon names among the investigated features. Like Shih et al.'s (2019) results for English, we found a strong negative correlation between *weight* and the number of labial consonants ( $BF_{10} = 11.15$ ). Other than that, the data revealed anecdotal evidence for a positive correlation between *defense* and the number of back vowels ( $BF_{10} = 1.71$ ), as well as anecdotal evidence for a negative correlation between *special defense* and the number of high vowels ( $BF_{10} = 1.58$ ). The results are interpreted in line with the “frequency code” (Ohala 1994).

The overall weak representation of robust sound-symbolic correspondences in German Pokémon names suggests that sound symbolism may be governed by language-specific factors, such as phonotactics, or phonology. German is an example of a language with a complex syllable structure, and consonant clusters both in the onset and the coda (Hoole et al. 2012). It also exhibits phonological features, which have not been covered by former and the current analyses, such as long–short, tense–lax, or rounded–unrounded vowel oppositions. The phonotactic and phonological structure of a language may, thus, be a window for studying sound symbolism. To outline the language-specific and cross-linguistic phenomena in sound symbolism, I discuss its overall potential, e.g., based on the established cross-modal correspondences (Spence 2011). I conclude that German Pokémon names are sound-symbolic but in their very own way.

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Hidden iconicity: de-iconization of Russian and English imitative lexicons

Maria Flaksman

<not updated>

## **Two measures are better than one: Combining ratings and guessing experiments for a more nuanced picture of iconicity in the lexicon**

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Keywords: iconicity, ideophones, markedness, Japanese, lexical norms

Iconicity in language is receiving increased attention from many fields, but our understanding of the roles of iconicity in language is only as good as the measures that we use to quantify it. In this study, we compare and contrast two popular behavioural measures of iconicity—ratings (e.g. Perry, Perlman, and Lupyan 2015; Hinojosa et al. 2020; Thompson, Akita, and Do 2020) and comprehension experiments (Lockwood, Hagoort, and Dingemans 2016; Dingemans et al. 2016; Sevcikova Sehyr and Emmorey 2019). We collected iconicity ratings for 300 Japanese words from monolingual English-speaking participants, using the crowd-sourcing platform Prolific. We chose words with sensory meanings as this is a domain generally found to be rich in iconicity (e.g. Winter et al. 2017; Hinojosa et al. 2020; Perlman et al. 2018), and included both ideophones (marked words that depict sensory imagery, Dingemans 2019), e.g. *fuwafuwa* ‘fluffy’ and *bonjari* ‘foggy’, and prosaic words, e.g. *fizukaja* ‘quiet’ and *jawarakai* ‘soft’.

The iconicity ratings were compared with results from a guessing experiment, in which monolingual English-speaking participants (again recruited through Prolific) were asked to match an English translation to a Japanese word, choosing between the real Japanese word and a word created by substituting each phoneme in the real word with its ‘opposite’ phoneme in Japanese (e.g. *bonjari*, *jettsuka*). Opposite phonemes were determined based on featural similarity (e.g. /b/ was substituted with /ʃ/ as this change required the greatest number of phonological feature changes), using the feature system provided in Mielke (2012).

We found that iconicity ratings and guessing accuracy were correlated, and that ideophones were generally rated higher in iconicity than prosaic words, even when guessed at the same accuracy. There were also some prosaic words which were rated low in iconicity, despite being guessed at very high accuracies. Many of the ideophones in the data were structurally marked (e.g. through the use of reduplication), and we hypothesise that this markedness in ideophones facilitates the perception of iconic links between form and meaning that may go unnoticed in prosaic vocabulary items

(Dingemanse et al. 2016), leading to higher iconicity ratings and good guessing accuracy for this word class. At the same time, the guessing results demonstrate that even vocabulary items that are not overtly iconic may still be guessable to some degree. The results highlight the influence of operationalizations of iconicity on research findings, and reveal a degree of non-arbitrary form-meaning mappings even in some quarters of prosaic vocabulary. When investigating the role of iconicity in language, future studies should consider which measures are most appropriate for their data, or whether multiple measures may be needed.

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## Japanese binomial adjectives

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Keywords: chronological iconicity, ideophones, mimetics, morphological template, truncation

Japanese has numerous adjectives that consist of two elements, such as *saku-uma-na* ‘be crunchy and yummy’ (ideophone + A) and *otona-kawai-i* ‘be adult-like and cute’ (N + A). These binomial adjectives are marked either by *-na* (COP) or *-i* in their nonpast adnominal uses, as with monomorphemic adjectives (Murasugi 1990). In the past two decades, both types of binomial

adjectives have dramatically increased their productivity, especially in teen slang. In this paper, we argue that binomial *na*-adjectives (*XY-na*), but not binomial *i*-adjectives (*XY-i*), exhibit chronological iconicity (aka iconicity of linearity) due to their special morphological properties.

We obtained 148 types of *XY-na* and 126 types of *XY-i* in our university classroom surveys and random internet search. They were classified into six semantic/syntactic types, as in (1).

- (1)
- |    |                |  |
|----|----------------|--|
| a. | Synonymy:      | <i>aza-{kawa-na/kawai-i}</i> ‘be shrewd and cute’        |
| b. | Antonymy:      | <i>kimo-{kawa-na/kawai-i}</i> ‘be weird but cute’        |
| c. | Sequence:      | <i>huwa-toro-{na/*i}</i> ‘be first fluffy, then creamy’  |
| d. | Causation:     | <i>saku-uma-{na/*i}</i> ‘be crunchy and therefore yummy’ |
| e. | Degree:        | <i>metya-{kawa-na/kawai-i}</i> ‘be very cute’            |
| f. | Incorporation: | <i>huk-karu-{na/i}</i> ‘be light-footed’                 |

As illustrated in (1), *XY-na*, but not *XY-i*, can express sequence and causation. These two semantic types of binomials involve chronological iconicity. X and Y in the sequence type represent the first and second perceptions, and X and Y in the causation type represent the cause and effect.

The semantic difference between *XY-na* and *XY-i* is attributed to their different morphological properties. *XY-na* involves an output-oriented word-formation based on a fixed template:  $[[\mu_1\mu_2-\mu_3\mu_4$  (unaccented)]<sub>A-na</sub>] (see Booij 2010). This bimoraic foot template is crucially shared by reduplicated ideophonic adjectives, such as *huwahuwa-na* ‘be fluffy’ and *torotoro-na* ‘be creamy’ (Poser 1990). In contrast, *XY-i* is a normal compound. The consequence of this difference is that, as with reduplicated ideophones, *XY-na* retains X and Y’s individual meanings, whereas *XY-i* integrates them as one.

This morphological template also assimilates *XY-na* to truncated phrases (Akita and Murasugi 2019). In informal discourse, the bimoraic foot template is utilized for clipping proverbs and the titles of books, movies, and TV dramas, such as *toratanu* (< *toranu tanuki-no kawa-zan’yoo* ‘Don’t count your chickens before they’re hatched’ (proverb)) and *Nigehazi* (< *Nigeru-wa hazi-daga yaku-ni tatu* ‘Running away is shameful but useful’ (TV drama title)). This type of truncation is applied to phrasal or sentential expressions, retaining eventive components in their semantics (e.g., ‘counting’ in *toratanu*). In a similar way, *XY-na* expresses sequential and causal events of property perception, packaging them in a single adjective form.

In conclusion, the chronological iconicity of *XY-na* has a clear morphological basis. *XY-na* shares the bimoraic foot template with adjectival ideophones and truncated phrases. This template allows for iconic signification in which X and Y retain their respective eventive meanings.

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## Iconicity of Adverbial Nouns of Time and Space in Telugu

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**Keywords:** Adverbial Nouns, Reduplication, Diagrammatic Iconicity, Event Plurality, Telugu

The present study is an attempt to explore aspects of diagrammatic iconicity associated with reduplicated adverbial nouns in Telugu, a Dravidian language. These nouns, which have no number and gender, functioning as post-positions and adverbs, become pluractional markers as they express semantic functions of plurality through the mechanism of reduplication. This study aims to investigate the iconic potential of these frequently used reduplicated spatial and temporal adverbial noun constructions by analyzing 400 such constructions taken from a personally created Telugu Text Corpus by Duggirala and Murty (2020) to identify the range of semantic functions each type expresses in everyday language.

In Telugu, reduplication (full-word, partial-word, echo word and compounds) in the domains of space and time involves demonstrative adverbial nouns of time (e.g. *appuḍu* ‘then’; *ippuḍu* ‘now’); space (e.g., *akkaḍa* ‘there’, *ikkaḍa* ‘here’); interrogative adverbial nouns *ekkaḍa* ‘where’ and *eppuḍu* ‘when’ and *ewaru* ‘who’. Sometimes they are accompanied by numerals (e.g., *okaṭi* ‘one’), quantifiers, and emphatic clitics (in bold below). Full-word reduplication sometimes results in sandhi whereby the final vowel of the first term is deleted or it agrees with the first vowel of the second term (see Table-1).

S.No	Simplex form	Gloss	Reduplicated form	Gloss
1	<i>akkaḍa</i>	‘there’	<i>akkaḍakkaḍaa</i>	‘here & there’
2	<i>ikkaḍa</i>	‘here’	<i>ikkaḍikkaḍee</i>	‘right here’
3	<i>ekkaḍa</i>	‘where’	<i>ekkaḍekkaḍa</i>	‘where all’
4	<i>appuḍu</i>	‘then’	<i>appuḍappuḍu</i>	‘once-in-a-while’
5	<i>ippuḍu</i>	‘now’	<i>ippuḍippuḍee</i>	‘Just now’
6	<i>eppuḍu</i>	‘when’	<i>eppuḍeppuḍoo</i>	‘a long time ago’
7	<i>ewaru</i>	‘who’	<i>ewarewaru</i>	‘who all’

Table-1: Some adverbial nouns of space and time in Telugu

Drawing on Mattiola’s (2020) concept of event plurality and its core functions, we first classified the constructions into four lists: iterative, frequentative, spatial distributivity and participant plurality and then examined their semantic functions relative to the meanings expressed by non-reduplicated base forms (see Table -2 for results):

S. No.	Reduplicated lexical item	# of Tokens	Semantic functions contributing to diagrammatic iconicity
1.	Temporal adverbial nouns	148	Frequentativity (105); Iterativity (43)
2.	Spatial adverbial nouns	75	Distributivity / Spatial extension
3.	Numerals /quantifiers	50	Additive & distributive plurality
4.	Temporal Spatial Adverbs	42	Intensification & Attenuation
5.	Adverbial nouns in metaphoric use	85	In over 70% of the tokens conceptual transfer of space to time was noted

Table -2: Semantic functions associated with reduplicated lexical items.

The examples below illustrate frequentativity (1) distributivity (2), and metaphoric use of spatial adverbial noun ‘ahead’ (3):

1. *appuḍappuḍuu toṭaloo aaḍukoneewaru*  
RED -then garden in-PP play-PAST PL (they)  
‘(they) used to play in the garden once-in-a-while.’

2. *aadi sooma*                      *waaraaloo*                      *akkaḍakkaḍaa teelikapaṭi*  
Sunday-Monday                      weekday-PL in-PP                      RED-here                      light  
*warshaalu*                      *wastaayi*  
rain - PL                      come-FUT  
'The forecast is for light rains here and there on Sunday and Monday.'
3. *mundu mundu annii*                      *niiku*                      *telustaayi*  
RED-ahead                      everything                      you DAT                      know-FUT  
'You will get to know everything by and by as things go along.'

It was observed that while reduplicated temporal and spatial adverbial nouns encode aspects of event plurality and express complex concepts relating to time and space, spatial adverbial nouns permit metaphoric expression more than the former.

Abbreviations: FUT =future; PAST= past; PL = Plural; RED = Reduplication; PP = Post Position

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## Iconic prosody and prosaic bases: a construction-based analysis of words ending in {o} in contemporary English

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Keywords: iconicity, CxM, suffix -o, iconic prosody, prosaic bases

English words ending in {o} have been traditionally associated with Spanish-origin loanwords and slang expressions, e.g. *loco*, *boho*. Although the origin of the suffix -o (or opportunistic ending {o} as in *schizo* and *homo*) has not been fully confirmed, it has been especially productive in Australasian varieties of English (Bauer et al., 2015, p. 392), and more recently in North American English, in which it has been associated with negative and marginal attitudes (Schneider, 2003, p. 111). The suffix -o is presupposed to embed prosaic bases (e.g. *fat(s)-*, *nut(s)-*) with concepts such as 'marginal' and 'pejorative', which confirms that morphological forms can be templatic or iconic.

This paper is aimed at exploring salient morphophonological traits of English slang words ending in {o}, particularly those expressing the meanings foolish person and mad person, as in *dozo* and *crazo* respectively. Based on a construction morphology (CxM) approach (Booij, 2010, 2019), the study attempts to describe the property of morphological iconicity in prosaic bases through the aspects of salience (Giraud & del Maso, 2016) and embedded productivity (Barðdal, 2008; Booij, 2010). A total of 402 words ending in {o} have been extracted from three descriptive English dictionaries: OED, GDS and ODS. All the words that pertain to the two case studies (foolish person and mad person) have been processed as constructional schemas to establish constructional networks. The aspects of phonological content (PHON), morphosyntactic properties (SYN) and semantic value (SEM) are expected to show (i) how the iconicity of {o} is inherited from prosaic words (*loco* →

*crazo*), and (ii) how disyllabic and trochaic clusters (i.e. Cl<sub>1</sub>VCl<sub>2</sub>o) are influenced by the templatic ending {o} (or suffix -o) through the process of iconic prosody (IP). IP is based on the notion that morphemes that become iconic (owing to high productivity and analogy) have an impact on the whole lexical unit's typical behavior (connotation, grammatical features, morphophonological rearrangement, etc.). Hence, in these particular case studies, the property of IP is accountable for the value of 'PERSON perceived as possessing negative qualities', leading to variation of grammatical categories and to the expression of pejorative/marginal traits.

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## WORKSHOP 13

### Indexicality

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**Keywords:** index, semiotics, grammar, interaction, language change

The concept of indexicality – originating in the semiotics of C.S. Peirce and his triad symbol, icon and index – has been applied in the description of a broad range of linguistic phenomena, from the internal workings of phonology and morphology via relations within syntactic constructions and lexical and grammatical elements designed to hook on to features outside the clause, to the choice of linguistic variants in social interaction.

In morphology, indexicality has been employed to describe the semiotic function of bound allomorphs (Anttila 1975, Andersen 2008: 29, see also Enger 2019, Andersen 2010, Andersen 2020 a.o.).

Case in languages such as Modern German have been analysed as having indexical meaning, as in (1), where the nominative, accusative and dative case index the ditransitive predicate *empfehlen* ‘recommend’ that assigns argument status and semantic roles to the case-marked DPs (Heltoft 2019: 154-155).

- (1) *der Rechtsanwalt hat dem Klient-en den Börsenmakler empfohlen*  
the.NOM attorney has the.DAT client-OBL the.ACC stockbroker recommended  
‘the attorney recommended the client the stockbroker’

Deictic elements, e.g. personal pronouns and deictic temporal adverbs such as *now*, are a classic example of linguistic indexicality (*shifters*, cf. Jakobson 1957) as the encoded meaning of the deictic element points beyond the internal structure of the utterance for interpretation.

The term indexicality is also well established in sociolinguistics in analyses of how linguistic choices may index aspects of speaker or addressee identity, such as in-group identification, gender etc. An example is ‘G-dropping’ (alveolar [n] instead of velar [ŋ]) in e.g. *waiting* by young men in US college fraternities to index social attributes such as ‘hardworking’ or ‘casual’ (Coupland 2007: 23).

The recent decades have seen a growing interest in the concept of indexicality as a tool for analysis and explanation and as an important semiotic aspect of the organization of linguistic structures (see Nielsen 2016). However, there is a number of phenomena that have (typically) not been approached as instances of indexicality present themselves as cases that would benefit from an index analysis, including Insubordination and dependency relations (see, a.o. Mithun 2008, Sansiñena 2015, D’Hertefelt 2018, Beijering et al. 2019); disambiguation of polysemous lexemes by inflectional allomorphs (cf. Wurzel 1980: 448–451), semiotic shifts from indexical to symbolic function, and the creation of domain-straddling indexicality (Nielsen and Heltoft forthc.)

The aim of the workshop is bringing together linguists working with different linguistic phenomena to discuss how distinct phenomena from different domains of language and linguistic analysis can be brought together under the heading of indexicality, and how linguistic analysis and description may benefit from interpreting them as instances of indexicality as a uniting property and a general semiotic phenomenon.

### Topics and questions

The theme of the workshop will encompass the following aspects of investigations into indexicality:

- (1) Empirical cases of linguistic indexicality that further our understanding of what an index may be
- (2) Analysis of different types of indexical function (e.g. indexing of a morphosyntactic feature, of a semantic property, of speaker attitude etc.), of what they have in common, how they differ and what the full range of possible types of linguistic indexing may be
- (3) Examinations of the role of indexes and indexicality in synchronic accounts of (a) language and in diachronic processes of linguistic change
- (4) Theoretical discussions of how indexical function fits into the larger picture of linguistic meaning and the semiotics of linguistic phenomena.

Of particular interest are the following topics and questions:

- (5) *Indexical functions that straddle different linguistic domains*
- (6) What types of domain-straddling indexical functions are found in languages, and what domains may be straddled (e.g. morphology/syntax, utterance-internal/extra-linguistic)?
- (7) Are different types of domain-straddling indexical functions essentially similar or different, and are they motivated and shaped by the same factors or different ones?
- (8) *Changes in indexical functions whereby the domain of the indexical relation is changed* (e.g. extension of what is indexed to include extra-linguistic situational features, or replacement of that which is indexed)
- (9) How do changes in the domain of indexical relations occur, what motivates the changes, and are they unidirectional?
- (10) How do these indexicality changes fit into mechanisms of grammaticalisation?
- (11) *Semiotic shifts whereby elements change from having indexical to symbolic function, or vice versa:*
- (12) What role do semiotic shifts play in diachronic changes, and are the shifts unidirectional?
- (13) What factors motivate or trigger a shift from indexical to symbolic function (or vice versa)?

Invited speaker: Livio Gaeta (University of Turin)

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### **Multifunctional indexes: Scandinavian gender markers in associated functions**

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Keywords: Scandinavian, gender marker, feminine, index, multifunctionality

We examine two cases involving change in gender markers in Scandinavian. The main point is that indexes, such as gender markers, can be multifunctional.

Gender markers may differ for different homonyms, as in Norwegian *en rev* ‘a.M fox’ vs. *et rev* ‘a.N reef’; *en fyr* ‘a.M bloke’ vs. *et fyr* ‘a.N lighthouse’. Braunmüller (2000) suggests that the respective determiners (*en* vs. *et*) here function to differentiate homonyms, and that it is uncommon to use gender to express this kind of semantic information. While this may well be right, there probably is a better approach to the question of function – or indexicality. Bobrova (2013) shows that there is a tendency for the gender contrast in such pairs to reflect a general feature of gender systems. In *rev*, *fyr*, the masculine indexes animacy, the neuter inanimacy. Such a contrast is not isolated in Scandinavian gender systems; the neuter is traditionally called the inanimate gender. Thus, the function of keeping homonyms apart is a side effect; what is primarily indexed is animacy.

In Gothenburg Swedish, the old feminine gender is being lost. However, the old feminine marker may now turn up in unexpected places. In the older dialect, the word *hamn* ‘harbour’ is a feminine, the word *kaj* ‘quai’ is a masculine. However, according to Andersson (2019), some speakers now treat *kaj* as a feminine. He sees this as a sign of linguistic insecurity. A somewhat different analysis (clearly compatible with what Andersson says elsewhere) is that the old feminine gender markers now are indexes of the ‘true vernacular’, of local identity.

A change from indexing gender to indexing local allegiance may seem so drastic as to warrant an analysis in terms of ‘exaptation’ (Lass 1990). However, such an analysis would be problematic, not only because of the general problems associated with exaptation (e.g. Jensen 2016). Immediately prior

to the change, the concrete feminine markers probably indexed both gender and Gothenburg identity. They could only acquire the latter function because they had come to contrast with corresponding markers in ‘Standard Swedish’, which (outside of pronouns) lost the feminine long ago and uses old masculine forms instead. A certain feature cannot be perceived as indicative of a dialect if it does not contrast with another feature from another salient dialect. For the feminine determiner *e* ‘a.F’ to indicate local identity, speakers need to know that Standard Swedish uses the masculine *en* ‘a.M’ instead.

Discussing a very similar change in Norwegian, Opsahl (2021) argues that sociolinguistic insights are relevant to change within the domain of grammatical gender. My take-away message is in agreement with Opsahl – and it is simple enough: an index may point to several indicata, which may in turn belong in different linguistic domains. In an age of increasing specialisation, we need to recall that indexes are often multifunctional.

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## Indexicality in contexts of literary fiction

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Keywords: indexical, fiction, first-person narration, truth-conditional semantics, context shift

There is much discussion devoted to the semantics of proper names belonging to fictional characters, but little attention has been given to situations where these characters are referred to via indexical expressions. First person narration, where the personal pronoun “I” functions as a direct link between an audience/reader and a fictional participant of the recounted story cannot be adequately explained on any currently available theory of semantics for fictional discourse. Literary studies have an excellent theoretical understanding of the differences between authors and narrators, but the same issue when situated at the intersection of analytic philosophy of language and linguistic semantics currently lacks a proper analysis though it could have profound implications for our understanding of both indexicality and the nature of fiction.

A traditional account of the semantics of “I” based on a two-dimensional framework predicts that first-person narration is a kind of autobiography of the author, since the indexical should automatically fix its reference to the context of utterance (which is understood as the context of fiction-making)(Kaplan, 1977, 1979; Lewis, 1980; Stalnaker, 1999). Accounts attempting to introduce context-shifting devices such as monster-operators or contextual perspective parameters tend to focus on shifting the reference of proper names by appealing to their special ontological status. They can rarely demonstrate how this mechanism would work for indexicals without disturbing their semantics

when used in regular discourse (with a notable exception of Vecsey (2013, 2015) who tackles the issue of indexicality explicitly and with promising results).

Approaches to the semantics of fiction based on the notion of pretense (Searle, 1975; Connolly, 2017) or attempt to deny semantic content to fictional accounts altogether (Predelli, 2020) cannot explain how indexicals can be successfully used in such discourse. It is conceivable that the name “Sherlock Holmes” would refer to nothing in particular (perhaps an abstract concept (Stokke, 2020), or merely a hypothetical set of properties that nobody in the real world actually exhibits (Rahman & Redmond, 2015)). However, the indexical “I” cannot be modeled as lacking a unique referent in this way. Indexical reference varies depending on use, so it cannot be mediated by a fixed set of properties. Situations of normal uses of the word “I” are not syntactically different enough from first person narration to posit a radically different semantics for them. While the name “Sherlock Holmes” always signifies a non-existent entity, the word “I” sometimes signifies entities such as John Watson, but needs to remain available for the uses when it refers to real people.

Indexicals constitute the part of language where the language as an abstract system and reality as the extra-semantic experience that we wish to describe come into the most direct contact. The fact that they can function in fictional discourse raises crucial questions concerning both the nature of fiction and of indexicality in a larger sense. The prevalence of first-person narration shows that the problem is not marginal and should not be treated as an outlier in data about language use. Exploring a model for fictional contexts, which would allow the “I” used in first person narration to correctly signify non-existent characters (rather than existent authors) without disturbing the directly referential properties of this word would shed more light on the roles and limits of indexicality.

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## Evolutionary steps for linguistic signs: The role of indexicality

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Keywords: Indexicality; Iconicity; Symbolism; Evolutionary Linguistics; Language Change

Peircean semiotics is notoriously based on triads, whose most debated triplet of index, icon and symbol has been taken to express the very essence of linguistic signs (Jakobson 1965). Indexicality refers to meanings, i.e. to mental representations, by means of physical contiguity, iconicity by means of structural complexity, while symbolism – i.e. symbolic coding – reaches the full-blown arbitrariness of a sign intended in constructional terms as a conventionalized pair of form and meaning (Dressler 1990, Gaeta 2002, 2019). It is important to stress that this last one expresses linguistic signs as mature – i.e. fully evolved – tools for communication intended both as information exchange and mind reading (Scott-Phillips 2015). On the other hand, the other two semiotic dimensions are also of extreme relevance both in evolutionary terms as a sort of primitive ways of encoding mental representations and in structural terms because they contribute in essential ways to shaping linguistic systems.

On this background, the paper will discuss more in detail the role of indexicality as essentially distinct from the other two insofar as it does not activate a full-fledged mental representation by itself but rather draws the attention towards a significant semiotic event upcoming in the neighborhood. This can be observed at the word level as shown by the Modern German Umlaut (FIG. 1), which normally signals the derived status of the involved signs independently of their concrete meanings and accordingly invites the reconstruction of complex paradigmatic relations within a given lexical family (Wurzel 1984, Gaeta 1998, 2004, Andersen 2010). While the Modern German Umlaut cannot be related to a particular derivational meaning, its indexical function enhances the paradigmatic tightness of the lexical family to the extent that the occurrence of a front rounded vowel invites the inference of a derivational relation with a basis containing a corresponding back vowel while the opposite does not normally occur, i.e. where a back vowel invites the inference of a basis containing a front rounded vowel.

The role of indexicality can also be observed at the utterance level as shown by the Italian presentational particle *ecco* (FIG. 2), which normally draws the attention towards a (physical or abstract) entity entering into a speech situation (Gaeta 2013, forthcoming). The particular interest of *ecco* as an indexical particle (cf. IT-a) resides in its extraordinary longevity because it basically continues its Latin ancestor *ecce* (cf. LAT-a-b) in contrast to other Romance languages where it was either replaced as in French by *voici/voilà* (cf. Bergen and Plauché 2005) or lost as in Spanish. In this perspective, the particle worms its way up into the Italian morphosyntax expanding its use in conventionalized – i.e. highly symbolic – constructions: it can be combined with a non-finite verb form (either an infinitive or a past participle) giving rise to a complex predicate (IT-b-c), and can also abandon its sentence-initial position and be embedded into a causal and a relative clause (IT-d-e). Thus, its primitive indexical value does not prevent *ecco* from being wired to highly complex constructions as a true – though defective – verbal particle.

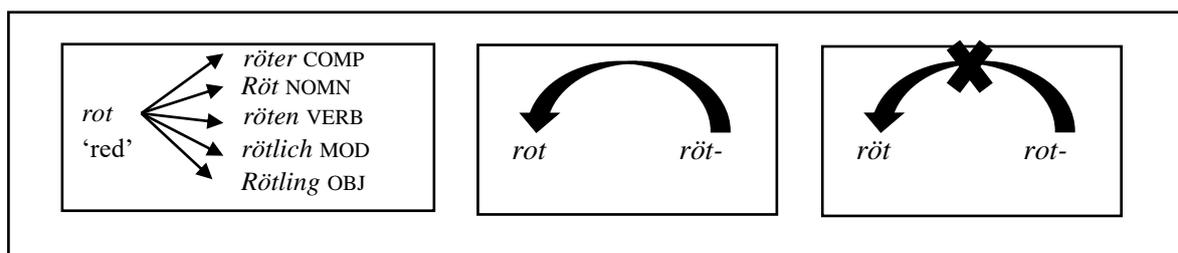


FIG. 1: The indexicality of Modern German Umlaut

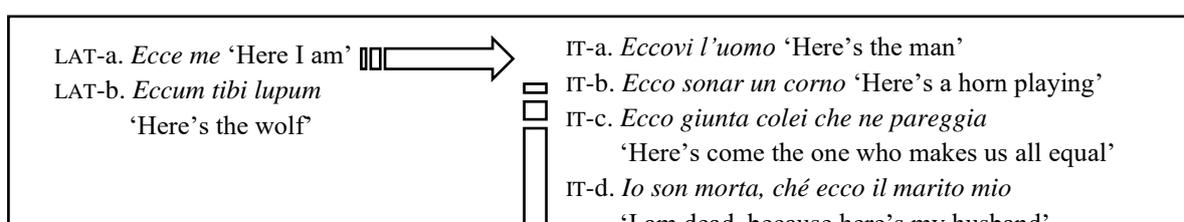


FIG. 2: The development of *ecce* from Latin to Italian

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## Domain-straddling indexicality: The Greenlandic causative

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Keywords: mood, deixis, linguistic context, subjunction, interactional particle

The term domain-straddling indexicality presupposes two domains. One is *deixis*, the anchoring of the utterance in context; the other domain relates to mental objects, within the language system to syntagmatic and paradigmatic relations between its elements.

A synchronic domain-straddling linguistic category both anchors the utterance and relates it to the linguistic context. A nutshell example is the Greenlandic causative, traditionally a subordinate mood (Bjørnum 2012, Fortescue 1984: 287). However, it is also used in plain main clauses (MCs), without any linguistically defined subordinating. (1a) illustrates the subordinate use, (1b) the anchoring use.

- |     |    |                            |  |                    |  |    |                         |
|-----|----|----------------------------|--|--------------------|--|----|-------------------------|
| (1) | a. | akikim-ma-t                |  | pisitari-vara      |  | b. | akikik-ka-mi            |
|     |    | cheap=be-CAUS-3P.SG        |  | buy-IND.1P.3P      |  |    | cheap=be-CAUS-4P.SG     |
|     |    | <i>Since it was cheap,</i> |  | <i>I bought it</i> |  |    | <i>It was so cheap!</i> |

In (1a), the causative points to the MC (*pisitarivara*) as its linguistic context and marks *akikip-* ‘be cheap’ as the reason for the action described; (1b) is a MC with the causative indicating some state-of-affairs recoverable from the situation, marking *akikip-* as the reason for this given contextual feature. The 4P-ending contributes to the anchoring as well; in the SC use, 4P would pick up the subject referent of the MC, here it picks up the contextually given topic referent. The MC usage extends to simple questions:

- (2) ulluqiqqa-nut saarullit-tu-ssa-ga-ssi (Fortescue 1984: 5):  
lunch-ALL cod-eat-FUTURE-CAUS-2PL  
a. *For lunch, are you going to have cod?* or, with another intonation contour:  
b. *You are going to have cod for lunch, I see*
- (3) nappar-sima-ga-mi? (Bjørnum 2012: 44)  
ill-RESULT-CAUS-4PSG  
*Has he fallen ill, then?*

Western European languages have nothing similar. Translating into Danish, the best way to render the illocutionary use of the causative is a situationally appropriate interactional particle (Jakobsen 1992, Davidsen-Nielsen 1996, Hansen and Heltoft 2011).

- (4) a. Skal I da have torsk til frokost? (translation of 2a.)  
will you PART have cod for lunch, then? (the addressee is carrying a nice specimen)  
b. I skal nok have torsk til frokost (possible translation of 2b.)  
You are going PART to have cod for lunch, I dare say

These particles anchor in an extended sense, including the speaker's assumptions about the status of the interaction. For instance, the deictic adverbs *nu* 'now', *da* 'then' have developed information structural and argumentative functions (*nu* 'this is a piece of information you have not considered' or 'this is counter-evidence'; *da* 'this you already know', or 'you should know better').

A closer parallel is the transposition of SCs to conventionalised MC use (Evans 2007; Sansiñena 2015), in which a subjunction has no matrix clause to indicate and must be interpreted as an illocutionary (emotive) particle instead. Danish offers, for instance: *Bare hun kommer hjem!* 'Wish she'll come home' (emotive for conditional), and *Når jeg tænker på den aften!* 'When I think of that night' (emotive for temporal).

The claim that the Greenlandic causative is a subordinate mood lead to the assumption of ellipsis of MC structure in situations where there are no conventionalised ways of filling in such implicit structure. The assumption that the causative has domain-straddling indexicality makes such claims unnecessary.

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## Indexicality of transcategorial morphemes

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Keywords: indexicality, lexicology, morphology, semantic, transcategoriality

The communication will approach the question of indexicality within an indicative-indexical conception of semantic instructions (Nemo, 2001) and hence both an instructional conception of the semantics of signs (Ducrot et alii, 1980; Nemo, 2003) and a purely indexical one (Cadiot, 1994).

In such approaches, indexicality is notably central to describe the relation between a morphemic semantic indication and the numerous interpretations it receives in its distinct uses (Nemo, 2001; Aptekman, 2009). A major field for such approaches has been the study of morphemes with

transcategorial distributions in which some uses are sentence-internal while others are used as discourse markers and hence inter-sentential (e.g., Horchani, 2018).

This will be done both for the synchronic uses of each set of lexemes and for their diachronic uses.

Based on both published analyzes (Nemo & Horchani, 2018) and recent work (Horchani & Nemo, “to appear”) the aim of the communication will be to present that approach to indexicality:

- about the French transcategorial morpheme /tant/ and all its uses, notably in lexemes like “*pourtant*” (however), “*autant*” (as much), “*tandis que*” (while), “*tant que*” (as long as), “*tant pis*” (too bad), “*tant mieux*” (all the better), etc.

- in the uses of French morpheme /ja/, which is present notably in “*jamais*” (never), “*jadis*” (formerly/long ago) and “*déjà*” (already).

In both cases, I shall describe how specific indications are provided by the morpheme, indexically interpreted, and how the result of this indexical process of unification is finally lexicalized/memorized into lexical meanings. This will be done both about the synchronic uses of each set of lexemes and their diachronic uses.

I shall finally describe the techniques used to identify the morphemic indications and, for each use, all the indexical path leading to the complete meaning of the corresponding lexemes.

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## Multi-layered indexicality: When proper names become categories

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Keywords: ad hoc categorization, context-dependency, proper names, reference, Italian

This paper aims to introduce and discuss the notion of ‘multi-layered indexicality’, i.e., indexicality implying multiple variables, connected at different layers of meaning. In particular, based on naturally occurring data from Italian corpora (e.g., CORIS, itTenTen, KIParla) and the World Wide Web, we argue that multi-layered indexicality is at work in those linguistic strategies that use proper names to indicate ‘types’ or ‘categories’, thus acquiring a symbolic meaning from a purely indexical one.

There is a long-standing tradition of studies revolving around proper names and their status of items with referential value but no sense (Anderson 2004). However, little attention has been devoted to proper names used to convey a property that is deemed typical of their referent. Searle (1958), when considering predicative constructions like *He is no Cicero*, calls “descriptive backing” the mechanism whereby names get to symbolize some characteristics. Yet, the range of constructions where this shift occurs is wider than usually thought. These include morphological constructions where the proper name serves as a base for derivation, like for instance in (1), where the verb *trumpeggiare* is coined (*Trump* plus the verbalizer *-eggiare*), with a very specific meaning (‘assuming the same sabotaging attitude displayed by Trump against Huawei’) which can only be interpreted if one knows Trump and knows what happened between him and Huawei.

- (1) *Ecco come Johnson non trumpeggia troppo contro Huawei sul 5G.*  
‘How Johnson doesn’t ‘trump’ too much against Huawei on 5G’

At the same time, proper names are found embedded into specific syntactic structures which license the same shifting mechanism. Take for instance (2)-(3) below. Example (2) displays the proper name (*Trump* again) preceded by a definite article and followed by the fixed expression *di turno*, literally meaning ‘(on) duty’: although *Trump* is explicitly mentioned as a stand-alone name, reference is not made to Trump himself but to any person who would behave like him *in that specific context*. Similarly, in example (3), the construction *stile X* ‘X-style’ acts as an indexical manner modifier whose meaning is inferred by abstraction and heavily relies on knowledge about Trump’s typical properties and behavior.

- (2) *Democrazia in pericolo se arriva il Trump di turno*  
‘Democracy in danger if some Trump arrives’  
(3) [...] *la politica urlata clownesca stile Trump*  
‘Trump-style clownish shouting politics’

We will provide a systematic analysis of these strategies, considering both their morphosyntactic properties and the semantic categories they lead to abstract. We claim that indexicality acts simultaneously at three different layers in the interpretation of these expressions. First, the *Referent* of the name has to be identified (*via* saturation, Recanati 2003), assigning a specific value to the variable R (first-layer indexicality). Second, the relevant *Context* has to be accessed, assigning a specific value to the variable C (second-layer indexicality). Third, the *Property* of R that is relevant in context C needs to be inferred, assigning a specific value to the variable P<sub>R,C</sub> (third-layer indexicality), which is ultimately responsible for the – flexible and triply context-dependent – interpretation of these constructions.

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The transition from stage I to stage II consists in **losing the relational index** from the semantics of the 2SG possessive: with the salient article the denoted relation does not vary with context and is always fixed to the “salient to” relation. So 0 may be paraphrased as “wipe the blackboard that is **salient to** you”.

The transition from II to III consists in **losing the index for the addressee** from the semantics of the marker, resulting in an anaphoric article. So 0 may be paraphrased as “the **aforementioned** dog started barking at me”.

In the talk I will discuss the three markers in more detail, as well as note the still indexical character of the anaphoric article (as it must index the antecedent of the current NP referent, see Schwarz 2009).

Abbreviations: 1, 2, 3 — 1, 2, 3 persons, *FREQ* — frequentative, *IMP* — imperative, *NFIN* — non-finite, *NPST* — non-past, *NSG* — non-singular, *PST* — past, *POSS* — possessive, *SG* — singular.

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## Indexicality in the minimal/non-minimal (or less minimal) sign relationship

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Keywords: indexicality, morphemic indications, contextual unification, layered semantics, conventionalization of the denominative value

Whereas indexicality is often conceived as a property of a specific class of semiotically-defined signs, namely deictics, my aim will be - following notably Pierre Cadiot's (1993) seminal work on the role of indexicality in the polysemy of nouns and subsequent works on the issue (Gasiglia, Nemo & Cadiot, 2001; Nemo, 2001; Nemo, 2002) - to describe it as inherent to the relationship between minimal signs and non-minimal signs, or between non-minimal signs and less minimal signs (e.g. zero-derived words)..

As for the morpheme/lexeme relationship, a clarification of the notions of *morpheme* and *lexeme* (Nemo, 2005) will be provided together with a description of the indexical relationship between the morphemic indications present in all the uses of a morpheme and the meanings of all the lexemes in which it is used (Nemo & Horchani, 2018). The key role of contextual unification as an indexical process (Nemo, 2003) will be described in great detail, together with a parallel description of

the way morphemic indications become shared presuppositions in the meaning of lexemes and of the way the indexical narrowing lexicalizes into a denominative lexemic meaning.

It will be illustrated for the morpheme /*meuble*/ and the nouns and names [*meuble*]<sub>Noun</sub> (i.e. piece of furniture), [*immeuble*]<sub>Noun</sub> (i.e. building), [*mobilier*]<sub>Noun</sub> (i.e. furniture), and the adjective [*meuble*]<sub>Adj</sub> (i.e. movable), showing the way unification of the morphemic indications with contextual elements takes place prior to the lexicalization of the outcome of that process into denominative labels for instance. A description of the way layered semantic structure of these lexemes will be provided, in which the morphemic indications have acquired a presuppositional status and the indexed objects a denominative status.

I will then show that the same is true when it comes to the relation between lexemes and their derivations, for instance when it comes to describing the relation between [*fly*] as a verb and [[*fly*]<sub>Verb</sub>] as a zero-derived noun/name, showing that even though memorization and conventionalization of indexed objects is the norm rather than the exception, the resulting signs/names are still pointing at specific features of the indexed objects.

I shall conclude by discussing the close relationship between indexicality and fractal interpretation.

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## From symbol to index: the semiotic alignment of the Danish free indirect object

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Keywords: indexicality, indirect object, Danish, language change, syntax

Why would Danish over the course of history all but give up a perfectly good syntactic option of adding a free (viz. non-valency-bound) indirect object (IO) to monotransitive constructions and yet retain a small cordoned reservation of permissible free IOs that essentially depend on pragmatics?

The diachronic restriction of the IO has been noted in previous research (Mikkelsen 1911, Heltoft 2019) – although only Nielsen & Heltoft (forthc.) describe the pragmatic aspects – but no explanation has been offered. This paper offers an explanation in terms of a shift from symbolic to indexical function that creates a semiotic alignment between the free IO and the subject, direct object, and valency-bound IO that results in all the NP arguments in Danish being indexical. In doing so, the paper presents the concept of semiotic alignment, offers a model for analysing symbol-to-index shifts, demonstrates how pragmatic factors enter into the rules that govern syntactic constructions, and provides an example of domain-straddling indexicality.

The theoretical framework of the study is structurally inspired functionalism (Engberg-Pedersen et al. 1996, Nørgård-Sørensen et al. 2011) and the semiotic approach of Andersen (2008, 2010). The data consist of historical written records from the 15th c. to the present and corpus data of present-day spoken Danish.

Until the mid-18th century, many Danish monotransitive constructions were readily extended with an IO not governed by verb valency (1).

- (1)     hun købte ham en bog  
          she bought him a book

At this stage, the free IO has symbolic meaning as it adds, independently, a Recipient argument. This contrasts with the semiotics of the subject, the direct object, and the valence-bound IO, which were and still are always governed by the predicate and in this way essentially indexical, pointing to the valence-bearer (cf. Heltoft 2019, Nielsen 2016: 113-115).

In today's Danish, the addition of a free IO is restricted to the pragmatic context of regulative speech acts (directives and commissives) that establish either speaker or hearer as wishing for the DO referent to be transferred to himself/herself as the IO referent, as in (2).

- (2)     køb mig en bog!  
          buy me a book!

The free IO has now become indexical, pointing to the extra-linguistically, interactionally established Recipient role (Nielsen & Heltoft, forthc.). But what is the mechanism behind this symbol-to-index change? From a general theoretical perspective, one may wonder why a symbol would give up its ability to express a content independently (by virtue of convention) and be demoted to merely indexing.

This paper offers an explanation in terms of semiotic alignment. The earlier symbolic free IO is brought into alignment with the subject, the DO, and the valence-bound IO. As a result, they all share the semiotic feature of being indexical, pointing to the precondition for their occurrence, be it intra-linguistic (indexing of valence-bearer) or extra-linguistic (indexing of speech act roles), and thus the semiotic shift of the free IO has led to the establishment of a domain-straddling index.

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## **Paradigmaticization as indexicalization: German “medio-passive” constructions with and without *lassen***

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Keywords: grammaticalization, indexicalization, passive, German, constructions

Grammatical signs are defined by their indexical function, which can be realized by multiple kinds of relations (Jakobson 1957, Heltoft accepted, Nielsen 2016, Peirce 1932, Politt to appear):

- i. Relations between grammatical signs in the same grammatical paradigm;
- ii. Relations between a grammatical sign and the elements it governs;
- iii. Relations between a grammatical sign and the deictic origo.

Thus, grammaticalization can be understood as an increase in indexicality: A change of the semiotic function of a sign from symbolic/characterizing to indexical. The more grammaticalized a sign is, the more indexical its function is. This entails that the degree of indexicality exhibited by a sign can help to determine its degree of grammaticalization (Diewald 2017, 2020, Politt to appear).

Starting from this background, we investigated the German “medio-passive”-construction with reflexive *sich* and the auxiliary *lassen* (1) in opposition to its competitor without *lassen* (2):

- (1) *Die Jacke lässt sich leicht waschen.*  
The.NOM coat lets itself.REFL easily to wash  
'The coat is easy to wash'
- (2) *Die Jacke wäscht sich leicht.*  
The.NOM coat washes itself.REFL easily  
'The coat is easy to wash'

These constructions are functionally equivalent (Behr 2020). However, their preference for complements differs: (2) is restricted to a handful of verbs and inanimate subjects, while (1) is found with a large number of verbs from different semantic classes and seems to be productive. Based on a corpus analysis of contemporary German texts (DWDS; Geyken 2007) we propose that the rise and expansion of the construction in (1) is accompanied by its integration into the system of voice marking in German (e.g. active (3), *werden*-passive (4)).

- (3) *Ich wasche die Jacke.*  
I wash the.ACC coat  
'I wash the coat'
- (4) *Die Jacke wird (von mir) gewaschen.*  
The.NOM coat becomes (by me) washed.  
'The coat is washed (by me).'

This integration is achieved by strengthening the indexical function both of the reflexive *sich*, which entails the deagentivization of the verbal complement, thus indexing distance from active, as well as the auxiliary *lassen*, which blocks the patienthood of the subject and thus distinguishes the *sich-lassen*-construction from both passives. In our analysis, we have a look at the verbal complements the constructions prefer, their preferred subject, and the question whether the adjective (*leicht* in (1) and (2)) could be a typical facultative complement of the newly grammaticalized constructions as opposed to the older voice markers in German.

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Are there non-indexical expressions?

Stef Spronck  
<not updated>

The history of the English dative alternation: from morphosyntax to pragmatics

Eva Zehentner  
<not updated>

## WORKSHOP 14

### **Integrating sociolinguistics and typological perspectives on language variation: methods and concepts**

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**Keynote speaker:** Susanne Michaelis (University of Leipzig, Max Planck Institute for the Science of Human History).

**Keywords:** linguistic diversity, sociolinguistics, language typology, language ecologies, dialectology

#### **Description and aims:**

Linguistic variation, loosely defined here as the wholesale processes whereby patterns of language structures exhibit divergent distributions within and across languages, has traditionally been the object of research of at least two branches of linguistics: variationist sociolinguistics and linguistic typology. In spite of their similar research agendas, the two approaches have only rarely converged in the description and interpretation of variation (see Trudgill 2011). While a number of studies attempting to address at least aspects of this relationship have appeared in recent years, a principled discussion on how the two disciplines may interact has not yet been carried out in a programmatic way. The present workshop aims to fill this gap and to provide a venue for discussions on the bridging between sociolinguistic and typological research, with the ultimate goal of laying out the methodological and conceptual foundations of an integrated research agenda for the study of linguistic variation.

We identify two broad promising domains of interaction between sociolinguistic and typological approaches to the study of variation:

#### (1) *Understanding and explaining non-linguistic correlates of linguistic diversity*

Over the past decades, researchers have argued that various factors pertaining to population structure and the broader ecology of speech communities contribute to shape the worldwide distribution of language structures. Examples of suggested factors are the difference between open and close-knit communities (Wray & Grace 2007; Trudgill 2011), geographic spread, population size, and number of linguistic neighbors (Lupyan & Dale 2010), proportion of L2 speakers in a community (Bentz & Winter 2013). These factors represent some of the building blocks of the *Linguistic Niche Hypothesis* (LNH, Lupyan & Dale 2010): language structures that represent a burden to adult learners (e.g., degree of inflectional synthesis) tend to be disfavored in language ecologies characterized by large numbers of speakers and loose network structures, and to be favored in language ecologies characterized by smaller population sizes and denser network structures.

Even though useful to test general hypotheses about linguistic adaptation, the sociohistorical variables that have so far been put to the test in the spirit of LNH remain somewhat *distal* to the fundamental mechanisms that underpin language variation and change. For instance, stating that there is a relationship between population size and phoneme inventory size (Hay & Bauer 2007; Wichmann et al. 2011; cf. also Moran et al. 2012) does not in itself fully explain the linguistic and socio-cognitive mechanisms that give rise to cross-linguistic differences in phoneme inventories.

Understanding the link between sociohistorical and typological variation ultimately requires a twofold effort: on the one hand, conducting in-depth studies of language evolution and change, and the role of contact and language ecology in the dynamics of language; on the other hand, using evidence from these studies to develop new methods and variables for large-scale comparisons of language structures, social structures and interactions thereof.

(2) *Understanding and explaining language-internal and cross-linguistic variation*

Structural variation is the main object of interest of typology and sociolinguistics: a closer interaction of the two disciplines may benefit both on a methodological and conceptual level.

On a methodological level, what typologists may learn from sociolinguistics is the opportunity to take into account (also) non-standard varieties, often neglected in the practice of building typological samples. The comparison between non-standard varieties may reveal the existence of common features even across typologically distant languages (cf. e.g. Auer 1990 and Auer & Maschler 2013 on Modern Hebrew and German) and could show patterns of variation that cannot be observed taking into consideration standard varieties only (Bossong 1991 and more recently Kortmann 2004, Chambers 2004, 2009, Filppula, Klemola & Paulasto 2009, Kortmann & Lunkenheimer 2013).

On a more conceptual level, linguistic variation is traditionally explained differently in typology and sociolinguistics. Patterns of cross-linguistic distributions are usually explained in terms of functional properties (economy, iconicity, processing, etc.) associated with individual constructions (Haspelmath 2019). Conversely, language internal variation is often explained by variationist sociolinguistics by also appealing to extra-linguistic socio-demographic factors (speakers' age and education, register, etc.). Likewise, in a historical perspective, typology has been concerned with the general mechanisms of language change that bring about specific cross-linguistic patterns of distribution (Cristofaro 2019), while sociolinguistics has put emphasis on the extra-linguistic factors behind the progressive diffusion of linguistic innovations within communities (Labov 2001). However, typological and sociolinguistic explanations of variation are in principle not mutually exclusive, and should be integrated into a general explanatory framework of linguistic variation.

The proposed workshop will bring together these two streams of research in the attempt of unifying *macro-* and *micro-*perspectives on language variation, thus creating opportunities for dialogue and exchange between scholars from each of these fields, their methods and proposed explanatory models.

We welcome contributions on any of the following topics (the list is not exhaustive):

- Theories:
  - conceptual tools for an integrated approach to the study of linguistic variation
- Methods:
  - sampling techniques and variable design (both sociolinguistic and typological) for studying adaptive responses of language structures to social structures.
  - corpus-based methodologies for crosslinguistic variationist studies.
  - typologically informed description of intra-linguistic variation.
- Contributions from the ground: large-scale typological investigations, speech-community-based studies, and/or experimental studies focusing on (the list is not exhaustive):
  - the relationship between language structures and the non-linguistic environment
  - language-internal vs. external explanations for language variation and change
  - models of change and diffusion at the community level and at the level of language structures.

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## **A socio-typological approach to conditionals: focus on counterfactuals**

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Keywords: conditionals, counterfactuals, typology, sociolinguistics, substandard

Conditionals have been widely studied in linguistic typology (e.g. Comrie 1986, Xrakovskij 2005) in order to find correlations between encoding patterns (e.g. verbal forms) and semantic types of conditionals (factual, hypothetical and counterfactual conditionals, Taylor 1997). Conditionals have also drawn the attention of sociolinguistic approaches, where the replacement of subjunctive with indicative forms has been analyzed as typical of colloquial and substandard varieties (cf. Ziegeler 2012 on Singaporean English; Gomes 2008 on English and Portuguese; Berruto 1983, Bertinetto 1986, Berretta 1993 on Italian).

However, the integration of these two perspectives is a rarity (but see Mazzoleni 2013). In this paper, we focus on counterfactuals, which Comrie (1986: 89) argues to be rarely if ever encoded by dedicated constructions, by combining a typological survey based on a 200-language sample and a fine-grained study of Spoken Italian using the sociolinguistic KIParla Corpus. While in Standard Italian counterfactual conditionals require a subjunctive protasis and a conditional apodosis, it is well known that in Spoken Italian this construction is frequently replaced by a double-past indicative one (cf. Prandi & DeSantis 2011:354,449). Similar constructions have been described across the world's languages, as widely argued by Nicolle (2017) and exemplified in (2) from Vwanji (Bantu).

Our aim is to account for the observed intra-linguistic and cross-linguistic variation by integrating the sociolinguistic dimension with a wider typological perspective. We will first annotate the hypothetical and counterfactual conditionals attested in the KIParla corpus, based on *i*) the verbal forms employed (indicative, subjunctive, conditional), *ii*) the speech situation, and *iii*) the speakers' characteristics (education, profession, age). Based on this classification, we will provide a sociolinguistically informed typology, in which we will identify symmetric (e.g. indicative-indicative (1a)) and asymmetric cases (e.g. indicative-conditional (1b)), arguing that the distribution of substandard strategies in Italian is not random. We will show that it correlates with the observed cross-linguistic patterns, in which counterfactuals appear to be frequently encoded by symmetric constructions, employing either irrealis or past forms. The counterfactual strategies collected in the 200-language sample are classified based on the verbal forms they employ, with special attention to the use of past tense, special mood, and irrealis.

All in all, we aim to show how by integrating micro- and macro-variation we can achieve a more comprehensive understanding of linguistic phenomena and their explanations and to show how typology and sociolinguistics can mutually benefit from each other.

(1) Italian (KIParla)

a. *era piu' comodo se bisognava darli a ale*  
 COP.IND.IMPF.3SG more convenient if need-IND.IMPF.3SG give-CLIT to Ale  
 'it would have been more convenient if we had given [the money] to Ale'

b. *se tifavo juve mio padre non sarebbe piu' tornato a casa*  
 if support-IND.IMPF.1SG Juve my father NEG COP.COND.PRS.3SG ever returned to home  
 '[my mother told me that] if I had supported Juventus, my father would have never returned home'

(2) Vwanji (Bantu, Nicolle 2017:8)

*[yɔ-ʔa-β-ile      ɔ-β-e      kɔ=kɪ-kɔlɔkɔlɔ]P*  
 2SG-PST4-be-ANT    2SG-be-SUBJ    LOC=CL-celebration

[yʊ-ʎa-β-ile ghʊ-i-polika ɪ-N-pola]<sub>Q</sub>  
2SG-PST4-be-ANT 2SG-PROG-hear AUG=CL-news

‘If you had been at the celebration, you would have heard the news.’

### Corpora

KIParla Corpus: <http://kiparla.it/>

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## Areal, family, and sociolinguistic effects on conditional constructions

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Socio-typological studies have revealed a relation between syntactic properties and socio-cultural factors, such as number of speakers, proportion of L1 and L2 speakers, literacy tradition, etc. (e.g. Bentz & Winter 2013, De Busser & LaPolla 2015, Karlsson et al. 2008, Lupyán & Dale 2010, Sinnemäki 2020, Sinnemäki & Di Garbo 2018, Trudgill 2011, Wray & Grace 2007). Similarly, Martowicz (2011) found a correlation between the degree of lexicalization/grammaticalization of conditional markers with several socio-cultural factors. Following up on those findings, this study examines the interaction between socio-linguistic as well as areal and family effects on the availability of conditional markers and constructions with a sample of 300 languages. While the use in writing may be expected to play a role, we do not yet know to what extent areal and genetic effects and language contact (cf. Bakker & Hekking 2012) may play a role and how those factors interact. We

focus on real and hypothetical conditionals, which express what could or might happen (cf. Thompson et al. 2007: 255-262), as in examples (1) to (3).

- (1) Là góe=p'ét t'òng góe=múút.  
 cond 2sg.m.s=exit.sg irr 2sg.m.s=die.sg  
 'If you go out, you will die.'  
 Goemai (Hellwig 2011: 457)
- (2) Nyila=ma=rna=nga warlagu=ma ba-rru guliyan=ma nyamu=yi=nga baya-wu.  
 that=top=1min.s=dub dog=top hit-pot dangerous=top rel=1min.o=dub bite=pot  
 'I'll hit the aggressive dog, if it bites me.'  
 Bilinarra (Meakins & Nordlinger 2013: 307)
- (3) muguchii-kwaa-ku-m, wi'i-vichi-gwa-vaa máy-pu-ga-s 'uwas.  
 shake-head-go-sub-2sg fall-descend-go-irr say-rem-conj 3sg  
 'But then if/when you shake your head, I will fall down, he said.'  
 Ute (Givón 2011: 365)

For each language, we determined the number of dedicated conditional markers, constructions, and other constructions used to express conditionality, e.g. temporal constructions (3). We fitted a series of Bayesian Poisson regression models to predict the number of markers/constructions from the number of speakers of a language, the presence of a literacy tradition, its use in written communication and in education. We controlled for genetic bias in modelling using phylogenetic regression, and for areal effects with a two-dimensional Gaussian Process (on latitude and longitude).

When used without additional control, the socio-linguistic predictors show a robust effect on real conditionals: especially a higher number of speakers and a higher degree of use in education are associated with a higher number of dedicated conditional markers as well as with a lower probability of a realis conditional marker being also used as a temporal marker.

However, after adding areal and family controls to the model, the effects of the sociolinguistic factors disappeared. While we cannot be certain that this result will hold for all possible sociolinguistic factors, it does show that what might seem like strong sociolinguistic effects can simply be the result of genetic and areal biases. This stresses the importance of careful modelling techniques in quantitative socio-typological studies.

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### **Syntactic elaboration: the case of auxiliation in the realm of communicative distance**

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In field of Romance linguistics, research on the role and function of linguistic forms from the point of view of discourse traditions has led to a more refined description of the anchoring of linguistic subsystems in specific communicative and sociolinguistic contexts. These forms and discourse traditions are then described as belonging to certain positions on the continuum between communicative immediacy and communicative distance (Koch & Oesterreicher 1990; Kabatek 2005; López Serena 2020). For example, more complex clause combining has been accounted for in terms of elaborate “junction” patterns belonging to the communicative distance (Raible 1992). In this paper, we will take such a view beyond “junction” expressions and argue that it is necessary to study grammatical variation phenomena on the sentence level are needed if we want to account for syntactic elaboration processes at large.

Syntactic elaboration can be defined as the creation and actualization of new and more specific syntactic expressions replacing others, which were often polysemic ones. Syntactic elaboration processes are generally associated with languages reaching advanced degrees of formality through the broadening of the linguistic repertoire in discourse traditions belonging to the communicative distance. In addition to connectives and certain discourse markers, we hypothesize that auxiliaries emerge in discourse traditions of the communicative distance and that they were used by high prestige social groups first. Hence, we assume that syntactic elaboration on the sentence level can be attested in the elaboration of the verbal group through auxiliation. Old Spanish saw the rise of a number of new verbal periphrases based on auxiliaries such as *amenazar* ‘to threaten’, *prometer* ‘to promise’, *parecer* ‘to seem’, *resultar* ‘to result’, *tener que* ‘have to’ in the modal domain, and *haber* ‘have’, *estar* ‘be’, *andar* ‘go’, *venir* ‘come’ in the temporal domain.

In order to test this claim, we analyze the development of these auxiliaries in quantitative longitudinal studies based on the historical corpus of Spanish of the *Corpus de documentos Españoles Anteriores a 1800* (GITHE 2018); which contains a variety of discourse traditions. Our analysis shows

that, in all cases, syntactic elaboration takes place in discourse traditions belonging to prestigious groups mastering the communicative distance and that differences in frequency point to an unequal spread over these discourse traditions. Thus, we will show how dimensions of the grammar of the distance stance emerge from specific sociolinguistic processes of selection and innovation. The paper illustrates that the prestige of linguistic forms consists in a certain degree of complexity fitting in the domain of scripturalness. At the same time, they resist the pressure of informal discourse traditions belonging to the communicative immediacy.

By adding auxiliaries to clause combing and discourse markers, we disentangle the mechanisms behind advanced written language elaboration. By doing so, we present a view of grammatical change that adds a social dimension to the Invited Inferencing Theory of Semantic change (Traugott & Dasher 2001).

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## **Analysing contact-induced simplification in Alorese using agent-based models**

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Keywords: language contact, agent-based modelling, morphological simplification, Austronesian, Papuan

Large-scale correlational investigations (Lupyan & Dale, 2010) indicate that the size of a population and the degree of contact with other groups show a negative correlation with the morphological complexity of the language spoken. Examples of large, high-contact languages and language groups which underwent morphological simplification are Arabic, Scandinavian and Swahili (Kusters, 2003). However, correlational studies do not give insight in the cognitive and social mechanisms leading to morphological simplification (Ladd et al., 2015).

Agent-based computer models; simulations of interactions between speakers, are one method to evaluate the effect of social structure on language structure (Smith, 2014). Agent-based models allow evaluation of multiple conditions (e.g. population size, interaction between groups, different cognitive mechanisms), which are infeasible to manipulate in the real world. Agent-based models have mostly been applied to abstract languages (e.g. Dale & Lupyán, 2012; Reali et al., 2018). To study what mechanisms give rise to morphological simplification, and how these mechanisms surface in the world's languages, we apply agent-based models to a concrete case study.

Alorese, an Austronesian language, is spoken on the coasts of the Alor and Pantar islands in Eastern Indonesia, while inland, Papuan Alor-Pantar languages are spoken. Many L1 speakers of Alor-Pantar languages have learned Alorese as a second language. While Alorese lost most of its morphology, its sister languages, which have not been in contact with Alor-Pantar languages, retained it (Klamer, 2012, 2020). We use agent-based models to study the hypothesis that adult language contact caused morphological simplification, focusing on inflectional verb morphology. The model is initialized with phonetic representations of verb forms in Lewoingu Lamaholot (1) (cf. Nishiyama & Kelen, 2007, p. 32), a sister language of Alorese (2) (cf. Klamer, 2011, p. 65), which lost the inflection:

(1)	<i>lodo-na</i>	Lewoingu Lamaholot
	go.down-3SG	
	'he goes down'	
(2)	<i>lodo-Ø</i>	Alorese
	go.down-3SG	
	'he goes down'	

We also use demographical data, about the proportion of L2 speakers of Alorese (Moro, 2019). Model outcomes are compared to Alorese, where simplification has occurred. We evaluate the effect of population size, proportion of L2 learners, community structures (Trudgill, 2011) and cognitive mechanisms: L1/L2 language processing (Ullman, 2001) and articulation economy (Lindblom, 1990). Our experiments will lead to new insights on the social and cognitive factors determining morphological simplification, in Alorese, and in language in general.

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## Intra-language variation in a typological perspective

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Keywords: variation, intra-language variation, typology

Variationist sociolinguistics has attracted the attention of linguists to the intra-language and intra-speaker variation. Within this paradigm, variation is usually understood as the cases when there are more than one way of saying the same thing in the same linguistic context (“linguistically insignificant but socially significant” – Chambers 2003: 3), such as English *n[ai]ther* and *n[i:]ther*.

There is always plenty of variation to be found in languages, but the amount of variation can be different. Linguists often provide estimates of the amount of variation in certain languages as low or – more often – as high (Genko 2005, Dorian 1981), or advance hypotheses about the reasons why languages have more or less variation:

- high degree of familiarity between the members of small communities can preserve variation (Trudgill 2001, with reference to Thurston 1989; Raviv et al. 2019).
- small exogamous communities have more variation than large ones, because of the connections with the speakers of other languages leading to rich external influence (Bowerman 2010).
- large language communities have more variation than small because their social structure is more diversified (Raviv 2020).
- written languages have less variation than languages without literacy tradition (Linell 2005)

- linguistic communities in change have more variation than stable communities because of the co-existence of generations with conservative and innovative variants (Dorian 1981).

To my knowledge, none of these challenging hypotheses has ever been tested statistically. In order to do such a test, linguists have to cross-breed variationist approaches with typological methods, and to find ways to perform cross-linguistic comparison of the degree of intra-language variation. This means elaborating such methods of measuring intra-language variation that would make these measurements cross-linguistically comparable.

The aim of this paper is to raise the issue of cross-linguistic comparison of the degree of intra-language variation and discuss possible approaches to this issue. The problem is that measuring the degree of variation in the language needs working a) with the speech of different people (because the speakers can be categorical users of some variables), b) with the corpus of certain size (because the variable might not show itself through the elicitation). The problem of cross-linguistic comparison of the amount of variation is that we cannot rely upon inventories of variables known for specific languages. The obvious reasons include the fact that variation is better studied and understood in some languages than in the others; and that individual experts working on different languages may be more or less prone to notice variation. As a result, we cannot have a full picture of all locuses of variation in a language, to compare languages to one another. For each language level, we need to conceive a cross-linguistically comparable space where the variation may be quantified, similar to how linguistic typology provides parameters for cross-linguistic variation, and probably even using some of these parameters. The paper will show the first results of the comparison of the degree of variation based on the spoken corpora of several languages.

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## Variation in Martinican complementation: a sociogrammatical approach

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Keywords: Martinican, creoles, complementation, variation, sociogrammar

Martinican is a French-based creole language spoken in the French West Indies island of Martinique by about 400.000 persons, all bilingual in Martinican and French. The literature on complement clauses in Martinican (Bernabé and Pinalie 1999; Damoiseau 2012; Colot and Ludwig 2013) points to a construction alternation for semantically equivalent complement clauses. This paper delineates the methodology I use to provide a corpus-based study of this variation in a sociogrammatical perspective (Nagy 2009; Meyerhoff 2017) that promotes the integration of variation within descriptive works and that considers both linguistic and non-linguistic variables interacting with the speakers' choices.

The literature states that most complement clauses are formed without any subordinator, as in. (1).

(1)

[...] zot di [zot ka monté]

2PL say 2PL IPFV go.up

[...] 'you said you are going up'

Descri OTA 1 031

An alternate construction is sometimes used by the speakers, that differs from the former in that it is introduced by a subordinator that can be *ki*, *ké*, or *ke*, as in (2).

(2)

man pé di [ke man té ka joué]

1SG can say SUB 1SG PST IPFV play

'I can say that I used to play'

FLU Narr 006

To describe the context of use of this alternate construction, various authors refer to different features. Valdman (1978, 270) argues that it is specific to complement clauses with a noun phrase in subject position. Damoiseau (2012, 138–41) talks about complement clauses “introduced by assertive predicates”. Syea (2017, 359–81) states that it is used with finite complement clauses only. In fact, the literature does not provide a consistent and detailed description of the complement clauses concerned by this variation. Furthermore, these references always depict the constructions using a subordinator as French-like or decreolized constructions because of its supposedly infrequent use and the presence and forms of the Martinican subordinators, which are reminiscent of the French complement clauses introduced with [kə]. Yet, no corpus-based work is available to support or contradict these claims.

My investigation is based on a sample of three hours of spontaneous narrations and descriptions recorded with nineteen native speakers of various sociolinguistic profiles. First, I identify the semantic profile of the complement clauses which allow this variation, using Cristofaro's (2005, 99) list of the cross-linguistic semantic areas of main clauses predicates (modality, phase, manipulation, desire, perception, knowledge, propositional attitude and utterance). On a syntactic level, I evaluate the finiteness of these clauses, based on two criteria relevant in Martinican: the use of TAM markers and of overtly expressed subjects. Secondly, I calculate the frequency of the presence of subordinators for the complement clauses that allow this variation, to determine whether there are semantic areas where each subordinator is more frequently used in my corpus, and whether this presence is correlated with finiteness. Finally, I carry out a statistical analysis of the interaction between the sociolinguistic characteristics of the speakers, namely age, gender, town and profession, and the frequency at which they employ a subordinator.

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## **Isolation and Complexification: some Evidence from Northern Italian Dialects**

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Keywords: Northern Italian Dialects, Isolation, Complexification, Piedmont, Gallo-Italic

In his seminal work on the interaction between sociolinguistic factors and typological change, Trudgill (2011) showed that isolated communities can develop some sort of complexification in their local varieties. Instances of this phenomenon have yet to be described for Northern Italian dialects, even if Andersen (1988) has described several cases for some Swiss Romansh varieties. This contribution aims to show that peculiar cases of complexification occur in the Gallo-Italic dialects of a few towns in the easternmost part of Piedmont, namely Borgomanero, Galliate, Trecate, Cameri and Quarna Sotto. These varieties display a substantial array of phonological, and morphosyntactic innovations, which are in large part idiosyncratic and somehow unique compared not only to the neighboring dialects, but also to the Gallo-Italic group as a whole. A good example of that is a peculiar type of unetymological nasal reinforcement, attested in Borgomanero, Cameri and Trecate (Tuttle 1992, 1993), so that Latin CANE(M) 'dog' > [køn] > [køk] in a prepausal context, while in *sandhi* contexts the nasal quality can be preserved. Another example of morphological complexification leading to morphophonological opacity is the generalized enclisis of object clitics to the Verbal Phrase in Galliate (Belletti et al. 1978), Trecate (Leone et al. 2000), Borgomanero (Tortora 2014: 92), that occurs with a few structural differences. This leads to the formation of heavy and often fused clitic strings, as in (1); clitic elements can also be postponed to a noun, a preposition or a negation if it makes part of the VP (2).

(1a) Galliate *darotra* (\**darò=ta=la* give-FUT-1S=you.CL.DAT.2SG=it.CL.ACC.3SG.FEM) ‘I’ll give it to you’

(1b) Trecate *i vöttu* (with metathesis *vödatu* < \**vödu=ta* see.3PL=you.CL.ACC.2SG) ‘they see you’

(2a) Galliate *sta mismi* (\**sta amisu=mi* stay.IMP.2S friend.SG=me.CL.DAT.SG) ‘be friend to me’

(2b) Borgomanero *i vangumma Gianni* (\**vangumma già=ni* see-1PL already=us.CL.ACC.1PL) ‘we have already seen each other’; [i ‘tʃami ‘mil:u] (\*[tʃami ‘mia=lu] call.1SG NEG=him.CL.ACC.3SG.MASC) ‘I don’t call him’

In the isolated variety of Quarna Sotto (3) the indirect object clitic can even be postponed to the object NP (Manzini, Savoia 2005: II 520), at an even higher level of the syntactic structure.

(3) Quarna Sotto [iɐ=**daj əu** ‘**libər=ət**] (give.1SG DET.MASC.SG book.SG=you.CL.DAT.2SG) ‘I give you the book’

These and other uncommon morphological features, often paired with the retention of phonetic and morphological archaisms, increase the overall linguistic complexity of these dialects in various degrees, as well as their morphophonological opacity. Some of these features have been already described *per se* (Tuttle 1992, 1993, Tortora 2014), but they can be put in a larger picture. Even if only Quarna Sotto is an isolated community in the strict geographic sense, the other towns can be considered, following Tuttle (1993), “closed” or “endocentric” communities that possibly developed such novel varieties as a result of low adult language contact, small community size, and stable social networks. The contribution, drawing data from studies and linguistic atlases, will show with synchronic, diachronic and areal evidence combined with the analysis of socio-historical factors, that different kinds of social isolation can lead to linguistic complexification, sometimes in unexpected ways.

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Sociolinguistic and typological variation in frames of spatial reference

Jonathon Lum, Bill Palmer, Alice Gaby & Jonathan Schlossberg

<not updated>

## The copula system in Palenquero: A preliminary variationist study

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Keywords: Palenquero Creole, copula system, extra-linguistic variation, identity marker, revitalization

Palenquero (henceforth PL), a Spanish-based Creole spoken in San Basilio de Palenque (Colombia), has a complex copular paradigm. In fact, the oppositional couple *ta/é* (and its allomorphs *era* and *jue*) works with adjectival predicates, and it coincides with the distribution of the Sp. *estar/ser*, being semantically motivated (1): in fact, *ta* is used with stage-level adjectival predicates and with locatives; *é* is used with individual-level adjectival predicates (Friedemann & Patiño 1983). *É*, *jue* and *era* also combine with nominal predicates (2).

Nevertheless, the distribution of the third and most innovative copula *sendá* (< Sp. *sentar(se)* ‘to sit’) hasn’t still been clarified (3).

(1) (Friedemann & Patiño 1983: 130)

Kuando	maní	ta	pario	é	mu	sabroso,
When	peanut	COP <sub>SL-pred</sub>	ripe	COP <sub>IL-pred.</sub>	very	tasteful pae.
buddy						

‘When peanuts are ripe, they are very tasty, buddy’.

(2) (ibid.)

Bo	é	mama	mi	nu.
2SG	COP	mother	my	NEG

‘You are not my mother’.

(3) (ivi, p. 131)

a.	Í	tan	sendá	dotó.
	1SG	FUT	COP	doctor

‘I will be a doctor’.

The present study offers a variational analysis of the distribution of *sendá* ~ *é/jue/era* carried out with a corpus of interviews conducted with native PL speakers. The results reveal that the copulas’ distribution varies according to the extra-linguistic demographic variable of age. Although the incidence of *sendá* has been recorded mostly in the traditional PL corpora, albeit exhibiting a low frequency of occurrence, I show that nowadays young PL speakers select the copula *sendá* in every syntactic environment; adults and older speakers, instead, prefer to use the copula *é* and its variants *era* and *jue* derived from the Sp. *ser*.

The age variable becomes an important factor in the analysis of the PL copula system, as it reflects the PL acquisition as a L2 among the younger generation during the revitalization process. In fact, after a previous strong stigmatization of the language during the 20<sup>th</sup> century, the revitalization program, aimed at constructing an identity consciousness in the community, promoted the restoration of many archaic lexical forms, felt to be more distant from the Spanish superstratum (Schwegler 2011; Lipski 2012).

Thus, the selection of a copula clearly distant from the Spanish derived forms by activists, PL language teachers and, consequently, by the younger population may be seen as an identity marker.

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## The systematic contributions of substrates and lexifiers in creolization

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Keywords: Creole languages, language contact, morphosyntax, grammaticalization, typology

In this talk I start out from the observation that creole languages, the result of recent language shift situations during the European colonial expansion between the 16th and 19th centuries, differ in a great number of grammatical features from one another (e.g. obligatory vs. optional subject pronouns; presence vs. absence of serial verb constructions; double-object constructions vs. indirect-object constructions). But when rigorously comparing a large number of unrelated creoles with each other (as in Michaelis et al. 2013, *Atlas of Pidgin and Creole Language Structures*, apics-online.info), a striking picture emerges: the structural variation is far from random. Instead we notice that when it comes to the inheritance of grammatical features, the contributions of lexifier languages and substrate languages are systematic. Lexifier languages pass on the main word order patterns (besides the bulk of the lexicon). This can be seen from examples (1-2) where the order of possessum and possessor in two creole languages, Guyanais and Jamaican, follows the word order of their lexifier language French and English.

(1a) Guyanais (French-based creole; Pfänder 2013)

<i>kaz</i>	<i>Georges</i>
house	George
POSSESSUM	POSSESSOR
‘the house of George’	

(1b) French

<i>la</i>	<i>maison de George</i>
DET.DEF.F	house of George
POSSESSUM	POSSESSOR
‘the house of George’	

(2a) Jamaican (English-based creole; Farquharson 2013)

<i>Mari</i>	<i>son</i>
Mary	son
POSSESSOR	POSSESSUM
‘Mary’s son’	

(2b) English

Mary's son

POSSESSOR POSSESSUM

However, substrate languages pass on grammatical features relating to argument marking, TAM categories, and event framing, such as experiencer constructions ‘I have a headache’, and weather constructions ‘it rains’ (Blasi et al. 2017, Michaelis 2019). An example comes from Haitian Creole (3a), where the meteorological event is expressed by a word referring to the natural element ‘rain’ in subject position, accompanied by a verb meaning ‘fall’. The same construction is used in Fongbe (3b), one major substrate of Haitian Creole:

(3a) Haitian Creole (French-based creole; Fattier 2013)

*Lapli a pral tonbe talè.*

Rain DEF FUT.go fall soon

‘It will rain very soon.’ (lit. ‘Rain will fall soon.’)

(3b) Fongbe (Kwa; Lefebvre & Brousseau 2002: 245)

*Jí jà.*

rain fall

‘It is raining.’ (lit. ‘Rain is falling.’)

I propose that this is because in the process of language shift, the creole creators systematically *impose* patterns of argument marking, TAM distinctions, and event framing from their African, Indic, Oceanic etc. languages onto the nascent creoles whereas they *adopt* the words and major word order patterns from their lexifier languages (English, French, Arabic, Japanese etc.) (Siegel 2008, Velupillai 2015).

The grammatical forms that express the imposed substrate patterns, such as adpositions, case and TAM markers, go back to lexical material from the creoles’ lexifier languages. As creoles arise in sociolinguistic contexts with many second-language speakers, grammatical meanings need to be expressed with extra clarity. Therefore, creoles show an extremely rich array of innovative refunctionalized grammatical markers, such as English *one* > indefinite article *wan* in Sranan; French *avec* ‘with’ > dative marker *ek* in Mauritian Creole; Portuguese *já* ‘already’ > perfective marker *dja* in Batavia Creole (cf. Michaelis & Haspelmath 2020).

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A scale of standardness for relative constructions in European varieties?

Adriano Murelli

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## **A sociolinguistic-typological approach to the linguistic prehistory of South Asia**

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Keywords: South Asia, sociolinguistic typology, Indo-Aryan, Munda, Dravidian, linguistic history

Sociolinguistic typology assumes that sociolinguistic situations, such as e.g. short-term, large-scale adult language learning or situations of stable bilingualism, can lead to different levels and types of morphological complexity in the respective language (e.g. Trudgill, 2002; 2011; 2020). As many of the assumptions made by sociolinguistic typology have now been largely confirmed statistically (e.g. Lupyán and Dale, 2010; Bentz & Winter, 2013; Bentz et al., 2015; Nichols and Bentz, 2018; Sinnemäki, 2009; and Sinnemäki and Di Garbo, 2018), I take here these assumptions to be valid and essentially change the direction of argumentation, using these assumptions now as a means of throwing light on prehistorical settlement patterns in South Asia, based on the corresponding levels of morphological complexity in closely related South Asian languages.

Eastern and western Indo-Aryan have been shown in recent studies to form two distinct groups from a structural-typological perspective, often crisscrossing internal historical groupings (e.g. Peterson, 2017; Ivani et al., in press). In my talk I therefore examine the morphological complexity of two New Indo-Aryan languages which can be viewed as typical exemplars of eastern and western Indo-Aryan, respectively. These are Sadri (eastern Indo-Aryan) and Goan Konkani (western Indo-

Aryan). Although closely related, these two languages differ strikingly with respect to their morphological complexity: While Sadri (and most of eastern Indo-Aryan) has undergone massive morphological simplification since Middle Indo-Aryan, especially in its nominal morphology, Konkani (and (south)western Indo-Aryan) has retained much of its morphological complexity. This strongly suggests that 2,500 – 3,000 years ago, eastern and western Indo-Aryan languages were spoken in radically different sociolinguistic environments, with a high degree of ethnic and linguistic diversity in eastern India and a comparatively low level of diversity and stable bilingualism in the west, in the latter case in line with recent research into this topic (e.g., Kulkarni-Joshi, 2017).

Finally, the evidence from South Asia also confirms other studies which suggest that different areas of grammar, in this case nominal and verbal systems, may be affected to different degrees in language contact and that their respective rates of (re-)complexification may also differ.

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## Variation, the role of frequency and social indexicality in the acquisition of Basque ergativity

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Keywords: Basque, ergativity, new speakers, social meaning, frequency

The acquisition of sociolinguistic variation is argued to present particular challenges, especially after a post-puberty threshold; learners need to be attuned to the relative frequencies and the ordering of the linguistic constraints, and to the socio-indexical relations that this variation entails (Meyerhoff & Schlee 2012). Work on language revitalization contexts, however, has challenged the view that certain bilinguals (new speakers) may orient to native speech models (Nance 2015), questioning assumptions regarding the ‘speech community’. This paper highlights the importance of considering ‘emic’ social factors along with the indexical value of structured variation in sociolinguistic typology. In doing so, we study the acquisition of the Basque ergative case marker *-k* among new speakers of Basque, a feature often deemed “L2-difficult” (Dahl 2004) with high sociolinguistic salience. The lexical frequency of the ergative construction is examined, as operationalized in Erker & Guy (2012), and its productivity assessed in comparison to the usage of traditional (‘native’) speakers. Additionally, the indexical value of ergativity is examined.

The spontaneous speech of 39 Basque-Spanish bilinguals, self-identified as *euskaldunberri* ‘new speaker’ (N=25); *euskaldun* ‘Basque speaker’ (N=4); *euskaldunzahar* ‘traditional speaker’ (N=10), was analyzed. Similar to Ortega et al (2015), ‘new’ and ‘Basque speakers’ began acquiring Standard Basque at school but ‘Basque speakers’ claimed more authenticity for actively engaging in Basque-speaking circles. Traditional speakers spoke a regional variety and used Basque regularly in their daily lives. Totalling 2,755 tokens, the use of ergative *-k* was coded for linguistic (verb-type, verbal frequency, phonological context, type of NP, grammatical person & number) and social predictors (language use, proficiency, gender). Additionally, a matched-guise experiment (MGE) was employed to obtain the social meaning of ergativity: participants listened to 4 target-guises, controlled for the presence/absence of ergative case marking, in two varieties (regional/Standard Basque) and responded to 18 questions using a 1-7 Likert-Scale. Data were analyzed using hierarchical-constraint analyses and mixed-effects models in R.

Results indicate that self-identification is a stronger predictor than proficiency in explaining ergativity productivity. Additionally, new speakers are more variable, but they show (a) consistent mastery of core internal constraints (verb type; phonological context), and (b) gradual structuring based on lexical frequency effects. The MGE results indicate that the variety of the speaker dictates the social indexical value of ergative omissions; while these omissions become more salient in Standard Basque only traditional speakers associate it with ‘new speakers’ and ‘lack of authenticity’. Finally, there was no direct relationship between ergative production and social meaning of ergativity.

These findings are consistent with Meyerhoff & Schlee (2012) in that constraints not found in traditional speech tend to appear among new speakers. The fact that new speakers reallocate these linguistic constraints based on token frequency indicates that they are attuned to distributional patterns through discourse and experience (Du Bois 2017), suggestive that language variation is acquired in a piece-meal fashion (Tomasello 2003). The different social meanings associated with ergative omissions are explained in terms of the speakers’ patterns of socialization and different disposition of self to others in line with Nance et al (2016).

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Defining borrowing hierarchies in the light of sociolinguistic and geodemographic causation: contact-induced morphosyntactic change in Asia Minor Greek

Konstantinos Sampanis, Utku Türk & Umut Gülsün  
<not updated>

A usage-based approach to morphological typology

Matthew Stave, Kilu von Prince & Frank Seifart  
<not updated>

## **Language-inherent variability or contact-induced change? The clitic *že* ‘after all’ in Russian speech of Nanai and Ulcha speakers**

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Keywords: language contact, Russian, Nanai, Ulcha, discourse markers

The paper deals with the use of the discourse enclitic *že* in Russian speech of Nanai and Ulcha speakers (Tungusic, Khabarovsk Krai). In Tungusic Russian, *že* is remarkable for its high frequency and a non-standard linear position:

- (1) *Oni razvodilis'=že*  
 3PL divorce(IPFV).PST.PL.REFL=PTCL  
 'The thing is they were divorcing' (ulc\_aap)

There are several claims on contact-induced grammatical change that can be tested on these data. First, it is difficult to differentiate between contact-induced and language-internal processes. Second, what looks like a pattern-borrowing in grammar of a contact-influenced variety might be in fact motivated by a weaker pressure of prescriptive norms. Finally, language contact often does not lead to the emergence of a new grammatical feature, but strengthens already-existing tendencies (cf., e.g., Thomason 2009; Poplack & Levey 2010).

In Monolingual Russian, *že* has a wide range of uses with sentential scope. It usually occupies the second (Wackernagel's) position in the clause:

- (2) *Oni=že poznakomilis'...*  
 3PL=PTCL meet(PFV).PST.3PL.REFL  
 'I mean, they met...' (rus\_kačarova)

In Old Russian its position was strict (Zaliznyak 2008), while in Modern Russian some variation is attested. The variation is greater in spoken texts; the position is more variable among the "argumentative" uses of *že* ('after all', 'I mean', 'the fact is'), cf. Valova & Slioussar (2017); a non-standard position can be motivated by information structure (Bonnot & Kodzasov 1998).

The closest counterpart to *že* in Nanai and Ulcha is the enclitic *guəni* (Nanai)~*guni* (Ulcha). It is more frequent than *že*, especially in Nanai. In Ulcha, its meaning is similar to that of the argumentative *že*. In Nanai, it is more bleached. Unlike *že*, *guəni*~*guni* occupies the postverbal position.

The first hypothesis on *že* in Tungusic Russian is that it copies some properties of the Tungusic *guəni*~*guni*. The alternative hypothesis is that its features have language-internal motivations.

I will check these hypotheses on the data from three samples of oral narratives: 1) Russian texts recorded from Nanai and Ulcha speakers, 2) Nanai and Ulcha texts, 3) texts produced by Russian monolinguals.

The corpus data show the following picture. *Že* is indeed more frequent in Tungusic Russian than in Monolingual Russian, although it is much less frequent than *guəni*~*guni*. In Ulcha Russian *že* is more frequent than in Nanai Russian. These tendencies are stronger for argumentative uses.

The argumentative *že* takes the second position significantly more often in Monolingual Russian than in Tungusic Russian (two-tailed exact Fisher's test was used in all cases discussed); the difference between the Nanai and Ulcha samples is non-significant.

In contrast, the postverbal position of *že* is more prevalent in Ulcha Russian than in Nanai Russian and Monolingual Russian, while Nanai Russian does not differ significantly from the monolingual benchmark.

These results can be interpreted as follows. In Ulcha Russian *že* shows a stronger association with the Tungusic *guəni*~*guni* both in frequency and positional properties than in Nanai Russian, since unlike the Nanai *guəni*, the Ulcha *guni* has a clear meaning, close to that of the argumentative *že*. This leads to a greater contrast with the monolingual benchmark in Ulcha Russian compared to Nanai Russian.

The contrast between the Nanai and Ulcha samples confirms the relevance of the language-contact factor. On the other hand, the behavior of *že* in Tungusic Russian goes in line with the tendencies reported for spoken Russian as a whole.

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Sociolinguistic parameters of Spanish fricative pronunciation: A corpusphonological approach to Spanish consonants

Verena Weiland

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Typological explanation and grammaticalization in a New English variety: Singapore English

Debra Ziegeler and Christophe Lenoble

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<b>WORKSHOP 15</b>
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### **Investigating language isolates: Typological and diachronic perspectives**

Iker Salaberri, Dorota Krajewska, Urtzi Reguero, Eneko Zuloaga, Borja Ariztimuño, Maitena Duhalde, Oxel Uribe-Etxebarria, Sergio Monforte, Ekaitz Santazilia & Koldo Ulibarri  
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Keywords: language isolates, typology, language history, comparative linguistics, language documentation and filiation

Recent years have witnessed advances in the study of language isolates (LIs) (Campbell (ed.) 2017). However, and despite the fact that LIs represent nearly 40% of the world's language families (Campbell 2017a: xi), they are still underrepresented in part of typological and comparative literature: see, for example, the objections by Miestamo et al. (2016) concerning sampling procedures in Voegelin & Voegelin (1977) and Bybee et al. (1994). In addition, little is known about the histories of most of these languages (Hombert & Philippson 2009).

This state of affairs is due to many reasons: in line with current world-wide tendencies, many LIs are becoming extinct even before they get the chance to be documented (Harrison 2007), and the lack of comprehensive information hinders a correct genetic affiliation of these languages, which often precludes their being treated as isolates (Blench 2017: 162). The lack of research on LIs from specific perspectives, for instance diachronic-historical linguistics, is also influenced by preconceived ideas including the view that isolates do not have a history: Meillet (1925: 11–12), for example, claims that “if a language is isolate, it is deprived of history”.

As a result of this data situation, it is unclear whether LIs are, from a typological and diachronic perspective, similar or different in comparison to non-isolates: whereas some authors contend that “language isolates are not very different from language families composed of multiple members” (Campbell 2017b: 1), other recent studies point in the opposite direction. The latter signal an overrepresentation—or at least presence—of typologically unusual features in isolates, such as the contrast between plain and post-aspirate nasals in Nasa Yuwe (Jung 2000: 141–142), verbal allocutivity in Basque, Nambikwara and Pumé (Antonov 2015: 80–81), the lack of an unambiguous standard negative system in Kusunda (Donohue et al. 2014) and a twenty-four-way system of numeral series according to the type of counted objects in Nivkh (Georg 2017: 148–149). Far less is known regarding the diachronic facet of LIs, despite the fact that a few languages such as Basque, Elamite, Mapudungun and Sumerian, among others, have sufficient textual evidence stretching over relatively long periods of time so as to allow for comprehensive historical and philological research (Hayes 1990, Khačikjan 1998, Zúñiga 2006, Ulibarri 2013).

This workshop is meant to delve deeper into the questions concerning the typological features and histories of LIs from different theoretical perspectives. It is also interested in exploring and discussing recent findings with respect to the documentation and filiation of endangered and poorly described LIs. We welcome contributions that address, among others, the following topics:

- What similarities and differences are there concerning the typological features of language isolates vs. non-isolates?
- How can we advance our knowledge of the history of language isolates?

- What similarities and differences are there concerning the historical changes of language isolates vs. non-isolates?
- How does linguistic contact affect language isolates?
- How much documentation, and of what kind, is necessary to determine the isolate status of languages?

Contributions that address these questions could be oriented in the following manner:

- comparative typological and/or historical studies on isolates and non isolates;
- corpus studies on the historical development of language isolates;
- studies which attempt internal reconstruction of language isolates;
- studies on the documentation of little-described or previously undescribed language isolates;
- studies that discuss attempts to establish the genetic filiation of language isolates and/or unclassified languages.

### **Acknowledgments**

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## **Linguistic isolates and the comparative method: On the controversial genetic affiliation of Burushaski**

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Keywords: Burushaski; comparative method; language contact and genealogy.

In a series of recent works culminating with the publication of a monograph in 2016 and a comprehensive etymological dictionary in 2017, Prof. Ilija Čašule claimed that Burushaski is not a linguistic isolate, as usually believed, but rather an Indo-European language of Balkan origin and, more specifically, a creolized form of Phrygian or of a closely related a North-Western IE language (Thracian, Illyrian, etc.). The claim has raised some discussion among specialists, and has been endorsed by many. The present talk, which is mainly based on the materials in Alfieri (2020), aims at reviewing the evidence on which Čašule's hypothesis is based from a fairly traditional comparative perspective (that is, from the usual perspective of the Indo-Europeanist). In other words, first the regularity of the sound correspondences, the regularity of the semantics of the lexical correspondences and the regularity of the correspondences in word-internal structure, with special reference to Nichols' notion of "multiple paradigmaticity" (Nichols 1996), are examined in the details. Then, the limits of the comparative method, the evidence needed for establishing genealogical sub-groups within a family, and the relevance of language contact in determining the genealogy of a linguistic isolate are discussed. Eventually, it will be argued that Burushaski can be better classified as a linguistic isolate that at some point in history was interferenced and partly relexified with one or more layers of Indo-European material, whose origin cannot be ascertained with certainty, rather than as an Indo-European language in the traditional sense. The major point of interest in respect to the workshop resides in a critical discussion on the applicability of the comparative method and its most recent developments. Following Ciancaglini (2008), as well as Campbell & Poster (2008), one of the main result of the talk will be the identification of a series of common theoretical and empirical deadlocks that can be met

when the comparative method is applied to linguistic isolates. More generally, the talk will provide a discussion on the preconditions needed to use the comparative method consistently (that is, antiquity in the attestations, unbroken continuity in the attestations, morphologically complex and diagrammatic word-structure, etc.) and on the complex relation between language genealogy and language contact.

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## **Ainu, an isolate in Northeast Asia: What makes it unique?**

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Keywords: Ainu, language isolate, Northeast Asian, Pacific Rim, head-marking

It has been claimed that language isolates tend to show more typologically unusual features than languages belonging to families. This paper focuses on Ainu, a Northeast Asian isolate, which considerably sticks out from its neighboring languages such as the so-called Altaic languages (Turkic, Mongolic, Manchu-Tungusic), Korean, Japanese, Nivkh, Yukaghir, and the Chukotko-Kamchatkan languages. The interesting features of Ainu include noun incorporation, a wealth of voices, a mixed system of expressing grammatical relations with the elements of tripartite alignment, nominal classification distinguishing common and locative nouns, an alienability opposition in nouns, a four-term evidential system, and verbal number. Like all languages in this region Ainu is SOV and agglutinating, but unlike many of them it is polysynthetic, incorporating and head-marking both at the clause and phrase level. This paper argues that most key features in Ainu are either directly or indirectly related to head-marking, which is marginal in Northeast Asia, where most languages are dependent-marking.

According to Nichols (1986), head- and dependent-marking characteristics are diachronically the most conservative and stable features of a language so that they can serve as a tool to generate hypotheses about the genetic and areal relatedness of a language or group of languages at a large time depth. If there is a sharp contrast with respect to the head-/dependent morphological marking type between a particular language and the languages within a proposed language family, this can be taken as negative evidence for the assumed genetic relationship. Migration of people – i.e. non-relatedness – may be the reason for this otherwise unlikely contrast (Nichols 1986: 98).

Moreover, in many respects, Ainu behaves as a Pacific Rim language, for instance, when possessive marking is concerned. According to the recent genetic studies too, “the Ainu represent a deep branch of East Asian diversity more basal than all present-day East Asian farmers” and they can be traced back to an early split from mainland Asian populations, jointly with one of the earliest American founder populations (Jeong et al. 2016: 261).

This paper claims that a high concentration of features that are unusual for Northeast Asia in Ainu is not due to the sole fact of its being a language isolate but is rather due to the population history of Northeast Asia out of different migration waves, of which the Ainu definitely represent one of the oldest waves in the region.

### **Acknowledgments**

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Is there a typological profile of isolates?

Natalia Chousou-Polydouri, David Inman, Marine Vuillermet, Kellen Parker van Dam, Shelece Easterday & Françoise Rose  
<not updated>

## **An Austronesian-type voice system in an Amazonian isolate**

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Keywords: isolate, symmetrical voice, inverse, Movima, Tagalog

Movima, an isolate of north-central Bolivia (Haude 2006), has typologically uncommon morphosyntactic properties:

- highly configurational, predicate-first syntax
- no copula
- near-absent syntactic noun/verb distinction
- noun-phrase markers (determiners)
- one syntactically privileged argument
- syncretism of internal argument and possessor
- two transitive constructions

The last item appears as a direct-inverse alternation: the arguments of a transitive clause are encoded according to a referential hierarchy, and their semantic roles are distinguished by verbal marking. Interestingly, in the context of the other features above, in Movima this alternation functions as a symmetrical-voice system, so far thought to be exclusive to Western Austronesian (WA) languages, e.g. Tagalog. The Movima direct (1a) corresponds to the Tagalog undergoer voices (UV), (2a), and the inverse (1b) to the Tagalog actor voice (AV), (2b). The argument that is encoded like the single argument of the intransitive clause (the “external argument”, not cliticized to the predicate; cf. the Tagalog “nominative”) is the undergoer in the direct and the actor in the inverse. As in Tagalog, only this argument can be extracted.

- (1) Movima
- |    |                            |                  |               |               |
|----|----------------------------|------------------|---------------|---------------|
| a. | <i>jom&lt;a&gt;ni=os</i>   | <i>mi:chi</i>    | <i>os</i>     | <i>notkwa</i> |
|    | devour<DR>= DET            | cat              | DET           | rat           |
|    | ‘The/a cat ate the/a rat.’ |                  |               |               |
| b. | <i>jommi-kaya=os</i>       | <i>notkwa os</i> | <i>mi:chi</i> |               |
|    | devour-INV= DET            | rat              | DET           | cat           |
|    | ‘The/a cat ate the rat.’   |                  |               |               |
- (2) Tagalog
- |    |   |                  |                 |
|----|---|------------------|-----------------|
| a. | <i>k&lt;in&gt;áin-Ø</i>                     | <i>nang=púsa</i> | <i>ang=daga</i> |
|    | <BEG>eat-PV                                 | GEN=cat          | NOM=rat         |
|    | ‘The cat ate the rat.’                      |                  |                 |
| b. | <i>k&lt;um&gt;áin</i>                       | <i>nang=dagà</i> | <i>ang=púsa</i> |
|    | <AV:BEG>eat                                 | GEN=rat          | NOM=cat         |
|    | ‘The cat ate a rat.’ (cf. Kaufman 2009b: 6) |                  |                 |

With the multiple syntactic parallels between Movima and WA, the origins of the Movima system can be explained along similar lines. The WA voice systems have been claimed to result from a reinterpretation of equational constructions in which the voice affixes functioned as participant nominalizers (Kaufman 2009a; Ross 2002; Starosta, Pawley & Reid 1982). Also in Movima, verbal predicates are systematically cognate with nominal predicates, and the voice morphemes appear as participant nominalizations. Hence, (2a) and (2b) can be paraphrased (at least etymologically) as in (3) (similar to (1); see Kaufman 2009b: 6).

- (3) a. direct: ‘The/a rat was the eaten one of the/a cat.’  
 b. inverse: ‘The/a cat was the eater of the/a rat.’

Thus, internal reconstruction explains several of the features listed above: verbal predicates are reanalyzed nominal predicates, so nominal and verbal syntax is barely distinguished; the external argument was the subject of the nominal clause, and so, extractable; the internal argument was the possessor of the former deverbal noun, with parallel lack of extractability.

Austronesian symmetrical-voice systems have been judged as “unique” (Sasse 2009). However, the appearance of a geographically remote isolate with similar syntactic properties shows that similar diachronic sources can develop into parallel systems in the absence of genetic or areal connections. Our study thus fails to find unique patterns (either synchronic or diachronic) that might be attributed to differences between isolates and languages that have surviving relatives. In contrast, careful collation of internal cognates followed by typological comparison with better-known and diachronically attested

structures allows explanations of unusual patterns in an isolate for which no diachronic data or attested comparators are available.

### Abbreviations

AV=actor voice; BEG=begun; DET=determiner; DR=direct; GEN=genitive; INV=inverse; NOM=nominative; PV=patient voice; UV=undergoer voice

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## **On the external and internal history of Nivkh (Amuric) in a comparative perspective**

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(University of Helsinki & University of Helsinki)

Keywords: language isolate, language shift, language expansion, Nivkh, Amuric

**Topic:** This paper deals with the comparative and diachronic typological position of Nivkh [niv] (Gilyak, Ghilyak), an isolate or a small family located in the Amur-Sakhalin region of the Russian Far East. As a language family, Nivkh is also known as Amuric. Together with several other isolates and small families on the Asian side of the North-Pacific Rim, including Ainu (Kurilic), Yukaghir (Kolymic), Itelmen (Kamchatic) and Chukchee-Koryak (Chukotic), Nivkh is conventionally also classified under the non-genetic labels “Paleoasiatic” or “Paleosiberian”.

**Setting:** Internally, Nivkh represents a continuum of some six to seven local idioms, which can be grouped into two major varieties, Nivkh (proper), or Amur Nivkh, and Nighvng, or Sakhalin Nivkh. Externally, the linguistic environment of Nivkh is today formed by Russian, but historically the neighbours of Nivkh include Sakhalin Ainu as well as several Tungusic languages spoken on the continent (Ewenki, Neghidal, Nanai, Ulcha, Oroch) and on Sakhalin (Uilta). Until recently, Nivkh has been involved in a regional network of contacts with most of the languages, but it also shows potentially significant deeper-level similarities with Korean.

**Facts:** Several languages in the neighbourhood of Nivkh, notably Tungusic, but also Korean and Japanese, represent the so-called Altaic language typology. Nivkh also shares some secondary properties of this typology, but more basically it is characterized by several idiosyncratic features, including, among other things, a unique vocabulary, an elaborate set of suffixally expressed numeral classifiers, a complex system of orientational markers, a phrase structure with object and modifier incorporation, a system of morpheme-initial consonant alternations, traces of a regressive tongue-root type of vowel harmony, a rich consonant paradigm with as many as five sets of obstruents, and some universally rare sounds such as the fricative trill [ʀ], see (Gruzdeva & Janhunen 2020).

**Research questions:** We wish to clarify what kind of connection there is between the rare typological features of Nivkh and its taxonomic status as an isolate, see (Campbell 2017). We expect to be able to show that the typological properties of Nivkh are not directly connected with its isolate status, but that they indirectly reflect the original linguistic diversity of the region. Some of the features concerned, such as the incorporating phrase structure, are probably primary in Nivkh, while others, like many of its phonological and phonotactic properties, are secondary, but even the secondary features may represent substratal traces connected with the earlier linguistic diversity.

**Approach and method:** The typological position of Nivkh can be evaluated by a qualitative and quantitative comparison with the neighbouring non-related languages. As an explanatory model we will postulate a model of recurrent language shift, which has accompanied the movement of Nivkh and its ancestral forms along the Amur from a more primary homeland in Central Manchuria. The translocation of the language took place in reaction to the expansion from the south of Tungusic-speaking populations, a development that itself was triggered by protohistorical political and demographic changes in Korea, Manchuria, Mongolia, and China.

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## **The case of the Big Bang: A methodology for tracing the history of a language and population isolate**

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(CNRS-LLACAN)

Keywords: language contact, borrowing, identity, pre-colonial West African populations, West African empires

Bangime is considered to be one of only four confirmed language isolates spoken in Africa (Blench 2017: 167; Güldemann 2018: 193). The Bangande, speakers of Bangime, live among seven small villages located atop a cliff range at the end of a valley in central-eastern Mali. The only other inhabitants of the rocky escarpment are Dogon, whose languages constitute an unaffiliated branch within the larger Niger-Congo language family. The adjacent valley is occupied by a Mande ethno-linguistic farming group, the Bozo, who are otherwise associated with fishing encampments along the

Niger River. Mande languages also occupy an independent branch of Niger-Congo. Currently classified within the Atlantic branch of Niger-Congo, Fulfulde-speaking Fula herders roam the area. Bangande people claim to be Dogon and that their language, Bangime, is one of the estimated 21 Dogon languages (see <https://dogonlanguages.org/>), even though Bangime shows no resemblance to any known language and the Bangande have resisted admixture with any sampled peoples (Babiker et al., 2020). To add to the enigma, as most Bangande do not speak nor understand any Dogon language, they are largely unaware that the root of their endonym [baŋg-] translates to ‘secret, furtive, hidden’ in some Dogon languages.

To account for these apparent paradoxes, Hantgan et al. (2020), examined borrowing patterns between Bangime and surrounding languages derived through computer-assisted means in comparison with published historical sources to hypothesize that the ancestors of those who currently speak Bangime formed part of the Mali Empire (1200-1600 A.D.). The authors suggest that the area where Bangime is spoken represents a relic of a previous state of linguistic diversity. Based on the relative recentness and cultural significance of terminology found in the language Bangime from immediately surrounding Dogon, Fulfulde, and Mande-speaking peoples such as the word for ‘slave’ as [kòmè], and from the representativeness of core-level vocabulary shared with Dogon speakers who today inhabit the more distant north-eastern portions of the cliffs as found in the example ‘hand’ [nù], the authors propose that the Bangande settled at different stages in their migration from their original, as of yet unknown, homeland. The Bangande claim a common origin with Dogon and Mande ethnolinguistic groups in a place simply known as ‘Mande’; it is possible that Dogon and Mande ancestral populations’ languages were eradicated with the waves of the lesser-known Mande-expansion (Brooks 1993). The genetic results indicate a population bottleneck for upwards of 9,000 years; this date goes beyond that available to linguistic reconstruction.

The area where Bangime is spoken is, at present, unavailable to outsiders. Despite the extensive anthropological, archaeological, ethnographic, and historical research that has taken place with Dogon and Mande groups and that of Fula (Fulfulde-speaking) historians, only linguistic and genetic work has been done with the Bangande. To this end, the present paper proposes to showcase a methodology for combining cross-disciplinary evidence applied to unraveling the Bangime/Bangande language/population mystery. As noted in the workshop description, few language isolates have known histories, thus this venue will be an ideal opportunity to discuss ways to overcome this impasse.

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## **California isolates: Language contact and genetic classification**

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Keywords: language contact, genetic classification, isolate, consonant inventories, affixing patterns

California is known for its linguistic diversity (78 languages in pre-contact times) and for pitfalls in trying to genetically classify the vast number of its indigenous languages (Golla 2011). The difficulty to group them genetically stems from the longstanding small-scale multilingualism, in addition to limited, mostly archival, and partly unreliable data. Although two large linguistic stocks, Hokan and Penutian, were proposed in the 20<sup>th</sup> century, many languages are still considered isolates. Some may also be unclassified, given the quality and quantity of the data available (Mithun 2017). This work examines prevalent linguistic features in ten California isolates and how they compare to non-isolates in the area to establish a potential link between linguistic features and isolate status.

Hokan and Penutian sparked debates about distant genetic relationships with various expansions and reformulations throughout the 20<sup>th</sup> century and beyond. However, it remains difficult to distinguish resemblances due to long-standing language contact from those attributed to genetic relationship. Recent work has emphasized language convergence in geographically contiguous areas, especially Northern California (Haynie 2012, Mithun 2010), where several structural similarities stem from language contact rather than genetic affiliation (Mithun 2008 and 2012). Nevertheless, typological databases (e.g. WALS) often cite these disputed genetic classifications, therefore failing to link certain features to language isolate status. In particular, California isolates are not always identified as such in typological work, whilst several typologically interesting features have been discussed.

The following isolates are examined: Chimariko, Achumawi, Atsugewi, Yana, Karuk, Esselen, Salinan, Washo, Klamath, Yokuts. The consonant inventories of these languages are strikingly similar: all are moderately large (26-33) and include ejectives (except for Karuk and Esselen); six also include glottalized resonants; six distinguish an aspirated stops series; and all lack phonemic obstruent voicing (except for Washo). Comparison with neighboring languages reveals that Esselen patterns like Costanoan and Karuk like Shastan in having smaller consonant inventories and lacking glottalized or aspirated sounds, while Washo behaves like neighboring Maiduan in featuring obstruent voicing. Similarly, lexical affixing and verbal compounding patterns with means and manner expressed verb-initially, and direction and location verb-finally occur in seven of the languages clustering in geographically contiguous areas (Mithun 2008, 2010, and 2017). They are absent from Esselen, Salinan, and Yokuts, while occurring in unrelated Maiduan and Pomoan. Other features, such as pluractionality marked as reduplication or otherwise occurs in seven of the isolates and switch reference in six. Both also exhibit similar configurations with features spanning across unrelated neighboring languages.

To conclude, while some linguistic features may be more prevalent in linguistic isolates, this work illustrates how linguistic features in California, a place with a large number of languages and isolates, spread across genetic boundaries in geographically contiguous areas, therefore being attributed to language contact rather than to isolate status. Moreover, this work encourages typological databases to acknowledge cases of widely disputed genetic affiliations and attribute potential isolate status to such languages to facilitate future research on isolates. Further work might survey the studied features in isolates outside of California.

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How typologically and areally unusual is Laal?

Florian Lionnet

<pdf>

## Etymologies and etymography in a language isolate: The case of Basque

Julen Manterola

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Keywords: etymography, quality of etymologies, Basque, language isolate, remote etymologies

### 1. Aims of the presentation

This communication provides two types of insights into Basque etymological studies: a) it presents some criteria that help us assess the quality of our etymologies, b) and shows how language isolates contribute to etymological lexicography.

### 2. Testing the quality of etymologies in a language isolate

Mailhammer (2015: 430-431) proposes four grades of quality by which we can measure etymologies. However, his criteria are not suitable for the etymological study of language isolates, since they are rooted in the possibility of practicing comparative reconstruction. I offer some alternative criteria that fit our object of study. If not a loanword, when discussing whether a particular lexical item can be ascribed to a certain lexical family, the following grades can be considered for the posited etymology:

- A: Non-problematic derivation.
- B: Phonetic derivation problematic, semantically appropriate.
- C: Problems in identifying all the components of the lexeme, semantically appropriate.
- D: Formally appropriate, semantically problematic.
- E: Problematic both formally and semantically.

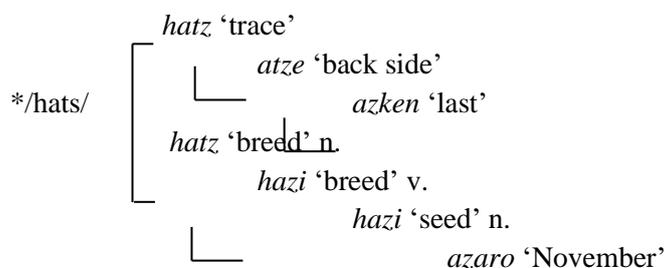
I exemplify this ranking with etymologies of lexical items that belong to different lexical families: Type A, *hazi* 'breed' belongs to the family of *hatz* 'finger; trace; breed', through *-i* derivation; Type B, *sator* 'mole' purportedly belongs to the family of *sagu* 'mouse', through composition with *gor* 'deaf';

Type C, *garratz* ‘bitter’ purportedly belongs to the family of *gar* ‘flame’, but the *-atz* ending is not identifiable; D type, homonyms *zori* ‘fate’ and *zori* ‘ripe’ cannot be subsumed under the same etymon, by reason of their semantic distance; Type E, *jarri* ‘put’ and *adar* ‘horn’ are claimed to derive from the same *\*dar* root (Lakarra 2018: 190).

### 3. The contribution to etymology of Basque etymological studies

The derivational morphology of Indo-European languages is better known than that of Proto-Basque. Consequently, their etymological dictionaries do not have the urge to offer a graphic layout that systematically reflects the hierarchies within the lexical sub-entries that belong to a single etymon; for example, in comparative endeavors (see Pokorny 1959), one of the aims is to establish whether a lexical item is a cognate to others within the larger language family, and morphological considerations do not need to be reflected by the lexicographic apparatus.

The possibility of external comparison is ruled out for Basque as far as the inherited lexicon is concerned, and our efforts are thus focused on establishing whether a lexical item belongs to a certain lexical family. Consequently, in the most recent Basque etymological dictionary (EHHE), the aforementioned morphological hierarchies make up an intrinsic part of the etymological proposal, and entries are displayed as follows:



We are thus enabled to present as remote etymologies as possible —while explicitly stating every intermediate step—, which is most desirable in the case of a language isolate (Buchi 2016). This is an improvement on more traditionally conceived dictionaries (Agud & Tovar 1988-1994, Trask 2008).

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## Temporal adverbial clauses in language isolates

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Keywords: Temporal adverbial clauses, subordination, clause-linking devices, language isolates

Language isolates have been underrepresented in most typological studies of adverbial clauses (e.g. Hetterle 2015). Accordingly, it is not clear whether they are typologically different from non-isolates with respect to the strategies they employ to encode adverbial clauses. The present study makes inroads into this territory by exploring temporal adverbial clauses in a sample of 30 language isolates. Special attention is paid to *when*-clauses, *after*-clauses, and *before*-clauses.

*When*-clauses tend to be encoded by free adverbial conjunctions, specialized converbs, and generic temporal nouns (e.g. ‘time’) in the languages of the world (Cristofaro 2013; Olguín Martínez 2020: 3). *When*-relations in language isolates are, for the most part, expressed by specialized converbs derived from locative case markers. Interestingly, various language isolates employ specific temporal nouns (e.g. ‘sun’, ‘night’, ‘year’) or constructions in which the temporal noun has been omitted, e.g. *at (the time of) my playing, she was running*.

Cross-linguistically, *after*-clauses are commonly marked by specialized converbs, free adverbial conjunctions, and sequential ‘and then’ coordinators (Olguín Martínez et al. 2018). Language isolates tend to employ sequential ‘and then’ coordinators. Diachronically, most of them seem to have been derived from ablative markers accompanied by demonstratives and from summary tail-head linkage construction (e.g. light or generic verbs accompanied by a deictic element ‘lit. do that=and then’). Another construction used in the encoding of *after*-clauses attested in some language isolates of the sample is that of consecutive affixes. These appear after a formally independent initial clause (lit. *I woke up, I went to school*-CONSECUTIVE ‘after I woke up, I went to school’) and are cross-linguistically rare in that they are mostly attested in non-isolate African languages (Creissels et al. 2008: 140). Interestingly, various language isolates spoken in Australia seem to have a similar construction (e.g. Wagiman; Cook 1987: 259).

Regarding *before*-clauses, various typological studies have shown that they tend to be encoded by a free adverbial conjunction accompanied by a negative marker, which may be obligatory or optional (Hetterle 2015: 136). *Before*-clauses in language isolates tend to occur with negative adverb(ial)s that are obligatory and cannot be omitted (lit. *before not yet...*).

This paper also shows that some of the strategies mentioned above (e.g. consecutive affixes in Australian languages) may have spread to language isolates through language contact. This is because: (1) the languages are spoken in the same region, (2) they are not genetically related, and (3) the probability of chance resemblance is low given the rarity of the strategies. Their areality is a puzzle, because speakers have replicated these rare strategies with native material (i.e. pattern replication).

The results show that while some language isolates have temporal clause-linking strategies that are typologically unusual, they are in general similar to non-isolates with respect to the strategies they employ to express temporal adverbial clauses. The next step is to explore other types of adverbial

clauses in language isolates, such as counterfactual conditional clauses and purpose clauses. This will enable us to come up with more fine-grained typological generalizations.

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## Reduplication in language isolates: Special or run-of-the-mill?

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Keywords: reduplication, language isolates, phonology, morphology, typology

Reduplication, i.e. the morphologically motivated repetition of linguistic material for a variety of grammatical and lexical uses, is widespread in the world’s languages, even if conspicuously absent, for example, from most European languages (at least in their standard varieties) and languages of the Arctic Circle (Rubino 2013). The present paper looks specifically at reduplication in language isolates (LIs), investigating whether this process is special in these languages or whether it rather aligns with cross-linguistically more typical, arguably iconically anchored reduplicative properties found in other linguistic areas and language families as well.

Subscribing to the recently suggested general importance of LI research for questions of linguistic theory, language typology and contact linguistics (Campbell 2018: xii–xiii), this contribution focuses particularly on reduplicating structures in LIs from a comparative typological angle. As a point of departure for the comparison, the study builds on a previous cross-linguistic investigation of reduplicative forms and functions by Schwaiger (2017), based on a convenience sample of 87 languages not consciously designed after the so-called diversity value method but nevertheless roughly conforming to the respective principles outlined by Rijkhoff et al. (1993). Considering formal and functional characteristics of reduplication, possibly unusual features, rarities or *rara* in LIs – e.g. Karok phonologically marked final-foot reduplication like *iftakan-tákan* ‘to be sticky’ < *iftakan-* ‘to stick’ (Bright 1957: 91), Kwaza reduplicated person marking plus nominalization expressing remote past (van der Voort 2003: 81–86), Movima reduplicative marking of inalienable adnominal possession or a possessive predicate (Haude 2006: 89–92) and Sumerian nominal plurality signaled by reduplication

of a following adjective (Michalowski 2018: 23), among others – are evaluated and compared to reduplicative features in non-isolates as extracted from the abovementioned sample.

Reduplication having repeatedly been argued to be cognitively grounded in (some version of) the principle of iconicity (e.g. Fischer 2011; Schwaiger 2017), the well-known overall preponderance of reduplicative plurality, intensity and diminution is also expected to be reflected in the reduplicative systems of LIs. Yet, at least some of the actual grammatical categories and semantic configurations instantiated by the process under scrutiny may turn out to be special in isolates after all. Some of the above examples already point in that direction. Nonetheless, where possible, potential contact phenomena with neighboring languages will need to be considered as well. For example, the Sumerian pattern might have been the component of a linguistic area in the Near East (see also Stolz et al. 2011: 530, note 483). Moreover, languages like Basque are of particular interest in such context. For one, said language is itself reduplicating but surrounded by Indo-European reduplication avoiders like French or Spanish. But perhaps even more curiously, Basque so-called echo-words like *zehatz~mehatz* ‘very precisely’ < *zehatz* ‘exact’ (Hualde and Ortiz de Urbina 2003: 361) have been claimed to be “an independent parallel development which is autonomous of any external pattern” (Stolz et al. 2011: 538) as can similarly be found in Turkic or Arabic, at least the latter of which has presumably come into direct contact with Basque in the past.

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## Baroque accretions and isolation: A view on language isolates

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Keywords: language isolates; linguistic isolation; Papuan languages; linguistic complexity; early population movements

This paper explores three case studies of isolates in isolation: Yélfí Dnye (Rossel Island, Papua New Guinea); Lavukaleve (Russell Islands, Solomon Islands); and Tayap (lower Sepik region, Papua New Guinea).

The paper shows that like many isolates, these three languages have developed what has been called “baroque accretions” (McWhorter 2001), or “mature phenomena” (Dahl 2004): extreme levels of complexity in one or more of the grammatical subsystems of the language. The paper argues that is no coincidence that these languages have historically all been spoken far from regular contact with other languages. Yélfí Dnye lies 450km offshore from the coast of Papua New Guinea (Levinson and Majid 2013), while Lavukaleve, although geographically close to other islands, until recently has still been isolated, beyond the range of everyday travel (Terrill 2003b; Sheppard and Walsh 2017). Tayap too lies a strenuous distance away from the next language group, and shows little evidence of interaction with its neighbours (Kulick 2019; Kulick and Terrill 2019).

The paper shows some examples of baroque accretions in Yélfí Dnye, Lavukaleve and Tayap, arguing that such phenomena are not favourable to adult language learning.

For instance, Yélfí Dnye has 90 phonemes, massive suppletion in verbal paradigms, and to a lesser extent with nouns, and massive conflation of morphological material in portmanteau forms (Levinson *forthc.*). Lavukaleve (Terrill 2003a) has nine different basic predicate marking systems, depending on tense, aspect, mood, transitivity and focus construction type. Basic participant marking also interacts with the gender/number system, with three noun classes interoperating with stem changes, and ten plural declensional classes, almost all of which are formally unpredictable, together with many independent, partially phonologically predictable, dual marking strategies. Tayap has massive suppletion in verbal and nominal paradigms with unpredictably different forms in all the major word classes. It also has complex and unpredictable morphophonemic processes.

What draws these three languages together is a high level of grammatical unpredictability, or baroque accretions. The hypothesis is that baroque accretions and isolation have a functional relationship.

The paper then compares a fourth isolate, Touo (Rendova Island, Solomon Islands). Touo, while an isolate, is by no means isolated: its speakers share their island with an Austronesian language and are in regular contact with other languages (Terrill and Dunn 2003; Terrill in *prep.*). Interestingly, this language does not have the baroque accretions of the other isolates, or indeed many other non-isolates. There is evidence of cultural mixing in Touo that is not found in the other isolates. Rendova lies on the edge of the famous Roviana Chiefdom, and while it appears not to have been a major player, evidence of cultural mixing abounds (Walter and Sheppard 2017).

The paper discusses the possibility that languages tend to build up accretions over time, and when there is no expectation of non-native speakers there is less need for simplicity. Therefore, it is not being an isolate as such, but rather isolation itself, that produces high levels of internal complexity.

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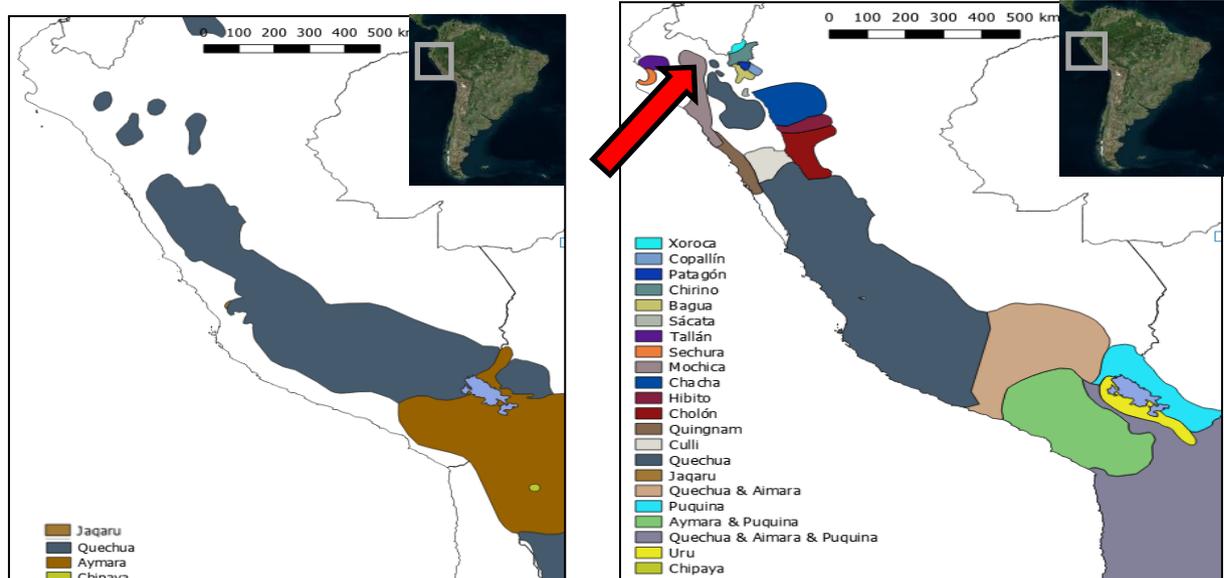
## Language Isolates and the linguistic prehistory of the Central Andes

Matthias Urban

Keywords: language isolates, Central Andes, toponymy, lexical borrowing, areal typology

The Central Andes of Peru and Bolivia are a culturally precocious region with a millenia-long pre-Columbian cultural trajectory involving complex societies.

When contemplating a map of its indigenous languages today (map below, lefthandside), two large language families, Quechuan and Aymaran, dominate. However, reconstructing the map of indigenous languages for the 16<sup>th</sup> century (map below, righthandside) shows that the linguistic landscape was much richer and involved many more local languages, especially in Northern Peru.



These extinct languages are poorly documented and, for all we know given the limited amount and quality of available data, were unrelated to Quechuan and Aymaran and, with the exception of Hibito-Cholón and Uru-Chipaya, also to themselves.

As with isolates generally, this makes it difficult to explore their history, an issue that in this case is exacerbated by data limitations. Drawing on published and unpublished work, here I will report how, contrary to Meillet (1925) but in line with Campbell (2017), isolates can be provided with time depth. I focus on how

-the toponymic record, analyzed on the basis of historical sources (e.g. Huertas 2005) as well as in a GIS framework using data from the NGA GEOnet Names Server, can illuminate the former distribution of the languages. This reveals that language boundaries were not sharp and that distributions were flowing into one another. It also suggests that languages may have formerly had wider distributions than commonly assumed. For instance, on the basis of the distribution of the ending -nique, which reflects a locative suffix of the Mochica language (Salas 2010), a presence of that language inland in the Upper Piura valley can be identified (red arrow).

-analysis of shared vocabulary items in sources such as Martínez Compañón ([1782-1790]1985, Carrera 1644, or Zevallos 1975) sheds light on the social ties between former speakers. Even though shared items are found also in “basic” vocabulary items (e.g. words for ‘to drink’, ‘bird’, ‘sea, lake’), it is unlikely that these betray genealogical relationships, since the items are scattered through the lexicon and easily recognizable through high similarity across languages, whereas the remainder of the known lexicon is radically different.

-analysis of reconstituted phonotactics and root shapes suggest a shared preference for monosyllabic “heavy” CVC root shapes that contrast starkly with common Quechuan-Aymaran canons. Interestingly, of all Quechuan languages, it is only those of northern Peru –Lambayeque and Chachapoyas Quechua– that have assimilated to some extent to preferred monosyllabic “heavy” root shapes in northern Peru by eliding unstressed vowels (Escribens 1977, Valqui and Shimelman to appear), suggesting a shared linguistic ecology based on interactions.

Taken together, the evidence is suggestive of a former interaction sphere involving the isolated languages of Northern Peru. Putting the linguistic evidence into an interdisciplinary perspective involving archaeological (Stanish 2001) and genetic perspectives (Barbieri et al. 2019), it emerges that this north-south structure in language geography and typology is mirrored in the other disciplines (Urban and Barbieri 2020), thus opening up new perspectives on the rich human prehistory of the Central Andes.

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The social life of isolates: a multidisciplinary approach to reconstructing the history of isolates in the north-west Amazon

Rik Van Gijn, Leonardo Arias, Nicholas Q. Emlen, Nora Julmi & Sietze Norder  
<not updated>

## WORKSHOP 16

### **Italian heritage language communities: Multiple perspectives**

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Keywords: Heritage languages, Italian, Dialect, Language contact, Language change

The study of Italian emigration, or Italian diaspora, has attracted growing interest among linguists over the last decades, and we can now count on a number of case studies describing the linguistic features of specific Italian communities abroad, as well as extensive overviews on the subject (Turchetta 2005, Vedovelli 2011, Di Salvo and Moreno 2017). However, most immigration settings involving communities of Italian origin are still poorly described, with data becoming more and more difficult to retrieve due to ongoing language shift towards the national language; currently, existing corpora are relatively small and there are even fewer resources available online. At the same time, not unlike other immigrant communities, research within this field needs to keep up with the constant evolution of migration flows over the years; in fact, changing mobilities create new multilingual societies and new heritage language scenarios that in most cases require an adaptation of the categories of analysis used for past migrations. Furthermore, while the previously mentioned research perspectives are a matter of concern in most cases of heritage language communities, there are specificities inherent in the Italian sociolinguistic scenario that characterize virtually all Italian communities abroad; indeed, as is now well-known, Italian has coexisted throughout history with Italo-romance dialects, i.e. sister languages that arose through regional differentiation of Latin during the Middle Ages (Auer 2005, Berruto 2005, 2012). Therefore, most Italian migrant communities have complex repertoires including one or more dialects and not necessarily including Standard Italian, which in Italy came to be used in ordinary spoken interactions only in the mid 20th century (see De Mauro 1963). This is also a crucial point where differences are expected to be found between older migrant communities and more recent ones: older migrations normally involved individuals who had dialect as their L1, while Italian appears to be the main resource in newer communities. As a consequence, there are different possible contact scenarios, not only determined by the languages spoken in the host country, but also related to the migrants' linguistic repertoires. Therefore, we identify two main directions in the study of Italian migrant communities: on the one hand, the study of language contact between the heritage language and the sociolinguistically dominant language; on the other hand, the study of contact occurring *within* the migrant community, between different dialects, different varieties of the same dialect, or different varieties of Italian.

This workshop aims to bring together the experiences of researchers working on Italian heritage communities, in order to achieve new theoretical advances that can make a lasting contribution to the discipline of heritage language studies, as well as to provide an in-depth exploration of the key features that are shared by most Italian heritage language communities. Below is a list of possible research topics that researchers are invited to consider while preparing their final submissions.

**Language documentation of Italian communities abroad.** We invite the submission of papers discussing ongoing or completed research on undescribed or poorly described Italian communities abroad, focusing on such linguistic aspects as linguistic repertoires, language contact with the national

language, code-switching, language variation and/or change in the heritage language, and language shift; authors are also encouraged to discuss fieldwork methods and current issues related to data collection, transcription and annotation.

**Italian and dialects in the heritage language scenario.** Several Italian heritage language communities are dialect-speaking communities. As said, this is a salient feature of Italian communities, one that has very few parallels at least among speakers of other European national languages. Key topics related to this aspect of migrant communities include complex repertoires, patterns of language maintenance or language shift associated with specific dialects (and possibly diverging from the tendencies in which Standard Italian is involved), language contact between a dialect and the national language and patterns of variation and change. Furthermore, a relatively understudied topic is contact between different mutually intelligible dialects within the migration setting; this has been described in a few cases where most migrants come from the same region and might eventually lead to the formation of new varieties that are referred to in the literature as migrant koinés (Kerswill 2006)

**Comparisons between old and new migrations.** Changes in migration patterns may lead to changes in the dynamics observed within the heritage language communities, both in their external sociolinguistic aspects (e.g. structure of linguistic repertoires and language maintenance vs shift) and in their structural outcomes. For this reason, we encourage the submission of works aimed at comparing different heritage language scenarios involving Italian communities, for example highlighting the differences between older communities--such as Italians in Brazil, Argentina or the United States--with more recent ones.

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## **Phonological change in Heritage Italian spoken in Toronto: Social factors and lexical frequency**

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Keywords: diaspora, heritage language, variationist sociolinguistics, lexical frequency, Voice Onset Time (VOT)

### **Topic and Approach**

The pronunciation patterns of heritage languages spoken in ethnic minority settings differ from those of both monolinguals and bilinguals of different sociolinguistic settings, and the reasons still have to be fully understood (Rao, 2016). In particular, we have very limited knowledge of whether and how sociophonetic variation is transmitted across generations.

In a previous study on Heritage Italian spoken in Toronto, we found that the transmission of a sociophonetic variable (voiceless stop aspiration) across three generations of immigrants differed from change in voiceless stop aspiration induced by increased contact with the majority language (Nodari et al., 2019). In particular, the findings suggested that the cross-generational transmission of sociolinguistically-indexed pronunciation features was more endangered than the transmission of pronunciation features that were not markers of sociolinguistic identity.

### **Research Questions**

In the current paper, we analyse the effects of lexical frequency in shaping the rate of voiceless stop aspiration across generations. The lexical level is a crucial component of many sound changes (Labov 1994, Bybee 2001). In heritage languages, lexical diversity tends to decrease across generations. By including lexical frequency as a factor in the analysis, we are able to distinguish true generational changes from changes induced by decreasing lexical diversity. This will contribute to the development of a comprehensive account of the transmission of sociophonetic variation in the heritage language context.

Moreover, we compare data from homeland speakers (in Calabria, Italy) to better understand the effects of the heritage language setting. Specifically, our analysis determines whether the pronunciation features found in the speech of first-generation heritage speakers differ from homeland features, which could be interpreted as an effect of reduced social variation in the immigration community.

### **Data and Method**

Data for this study come from sociolinguistic interviews collected by the Heritage Language Variation and Change in Toronto Project (HLVC, Nagy, 2009, 2011). Participants and interviewers are heritage speakers of Calabrian Italian. 3,408 stressed and unstressed syllables with intervocalic or post-sonorant /p/, /t/, /k/ are acoustically annotated for VOT and perceived aspiration, following the methodology in Nodari et al. (2019). Mixed-effects models for continuous variable VOT and logistic regression models for the binary variable of perceived aspiration test the effect of phonetic, social and lexical predictors.

### **Results**

Concerning lexical effects, we show that sociophonetic aspiration resists lexicalization and applies to both frequent and infrequent words even in the speech of third generation speakers. By contrast, the

progressive introduction of contact-induced aspiration is led by high-frequency words. These findings add to the complexity of heritage language phonology by suggesting that the impact of decreased lexical diversity on sound change differs as a function of the sociolinguistic status of phonetic features. The comparison between homeland speakers and first-generation immigrants is still in progress but our analysis suggests that first generation immigrants' speech is not substantially different from homeland speech, in spite of substantially different social settings.

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## **Designing and building a web corpus of Talian (Brazilian Venetian language)**

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(Federal University of Minas Gerais)

Keywords: heritage language corpora, Talian dialect, Italian diaspora, Italian Brazilians, internet linguistics

Talian is a Venetian dialect (or rather a koiné of dialects) spoken in Southern and Southeastern Brazil as a heritage language by a significant number of descendants of Italian immigrants. Mostly due to the pressure from Portuguese, Talian is in danger of disappearing within a few generations – despite some efforts, especially in recent years, aiming at its maintenance and revitalization.

By favoring the dissemination of majority languages, one of the factors that hinder the preservation of minority languages is the growth in internet access across the globe (Kornai 2013). Paradoxically, the internet has also been useful in the process of preserving endangered language varieties, serving as a platform for institutional pages dedicated to the archiving of oral and written texts, and for individual and collective initiatives intended at encouraging the use of these dialects and languages on the web (Cunha 2020).

In this presentation, I introduce the ongoing efforts for the compilation of a web corpus of Talian, which will be made freely available (at [www.dcc.ufmg.br/~evandrocunha](http://www.dcc.ufmg.br/~evandrocunha)) as soon as its first publishable version is completed. The texts that constitute this corpus are being collected (using a semi-automatic procedure) from profiles, pages and groups dedicated to the interaction in Talian in two popular social networking sites: Facebook and Instagram.

In addition to contributing to the documentation of Talian, we expect that our corpus will foster more studies on this language variety. Our investigations using data from a preliminary version of the corpus are dealing with the effects of the contact between Talian and Brazilian Portuguese, especially focusing on: (a) the use of loanwords; (b) code-switching; and (c) the formation of a mixed language. A preliminary version of the corpus is also being used to assess the vitality of Talian on the web and to verify the potential of online social networks to perform as “virtual squares” in which endangered languages gain a voice.

Ultimately, we hope that this corpus will be useful for conducting research not only in linguistics, but also in related fields, such as literary and cultural studies. Moreover, we expect that it will contribute to the task of preserving and maintaining this language variety, which is a relevant task due to the status of Talian as a linguistic and cultural heritage of both the Italian and Brazilian communities.

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## **The role of well-defined areas of origin in the trends of language contact phenomena in contexts of migration: The case of an Italian community in Bletchley (Milton Keynes)**

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**Keywords:** Italian emigration; language contact; code-switching; well-defined community; sociolinguistics

Research on Italian emigration has shed some light on language contact phenomena in bilingual conversations and shown a great deal of variation, especially among vast regional groups of migrants, depending on such factors as the place of origin and arrival, among others (Di Salvo 2014, Rubino 2014). In the case of a group of migrants from the same village or province who migrated to the same place, can a well-defined area of origin show different trends of language contact phenomena and/or a smaller amount of variation of these among the community members?

An example of this kind of situation is a community of Italians from two small villages in the province of Benevento (Baselice and Colle Sannita) emigrated to Bletchley (Milton Keynes) and now composed of at least three generations of migrants. The bonds among the members seem to be very tight and the sense of Italian identity is very strong, emphasised by the presence of associations and events dedicated to them.

Taking into account these characteristics, the main purpose of the research is to verify to what extent the features of a community from a well-defined area of origin may have an impact on language contact phenomena (especially those observable in speech, such as ‘code-switching’ and ‘code-

mixing’) and their variation within the group. Therefore, the study is aimed at identifying language contact phenomena between the migrants’ native languages (i.e. a variety of Italian and an Italo-Romance dialect) and the language of the host country (i.e. a variety of English), in conversations among members of both the same generation and different generations. It is also aimed at analysing their function and their variation within the community. More specifically, after detecting the phenomena and making a comparison with data from other studies on Italian emigration, their function and their relations with other non-linguistic variables (e.g. generation of migrants, age, gender, education, migration wave, etc.) are assessed. In order to accomplish these research tasks, data of real conversations are collected through both interviews and recordings of spontaneous speech.

Considering the sociolinguistic features of this community and comparing the results of this research with what has already been observed in literature, different trends of language contact phenomena and a quite homogeneous linguistic behaviour among the community members are expected.

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## **Differential Object Marking in two Italian communities abroad: Diatopic and network variation**

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Keywords: diaspora, Differential Object Marking (DOM), heritage language, variationist sociolinguistics

We compare variable patterns of use of differential object marking (DOM) in conversational regional Italian, combining variationist sociolinguistic and language contact approaches to examine variation and change in Heritage Italian. Since, as Leonetti (2008:60) notes, “DOM in Romance is sensitive to a series of dimensions that make up a multidimensional bundle of factors”, we compare four communities in order to query the role of the context of residence and the generation (since immigration) in this variable: Campanians in Italy and in Bedford, UK, and Calabrians in Italy and in Toronto, Canada. These communities are distinguished by distance from the home country and type of network connections. The British group lives closer to the homeland and retains a higher rate of use of Italian than the Canadian group, according to self-reported measures. The contexts of the Canadian and British groups also differ in the density of Italians in the overall population, local attitudes towards bilingualism and immigration policies (Canada supports migrant integration, UK migrant assimilation).

Studies of Spanish DOM highlight a tendency to omit the prepositional marker (in up to 50% of possible contexts) by speakers in the US, leading to the conclusion that “even advanced heritage speakers are very inaccurate with DOM” (Montrul et al. 2015:576). In contrast, most studies report high accuracy for HSs in prescriptively zero-marking contexts (Irizarri van Suchtelen 2016:103).

These studies suggest the importance of a comparative perspective and further investigation: additionally, Italian as a heritage language is not well-documented (Di Salvo 2017).

Data was collected and analyzed following the standard sociolinguistic interview protocol (cf. Labov 1984). Analysis situated in the comparative variationist framework compares patterns of variation (*a* + Object vs. bare Object) in samples of spontaneous conversations across the four groups (n=509). All generations retain conditioning of three factors (Object Referent, Verb Type, Dislocation) in Animate Object contexts and rarely overextended the marker to Inanimate Object contexts. The Campanian group (Homeland and Heritage combined) has a higher rate of DO-marking, suggesting that their more frequent use of Italian has “protected” this reportedly vulnerable context. Paradoxically, however, Generation was not a predictor of the rate of DOM use in either community.

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## Rhetorical questions in German-dominant Heritage Speakers of Italian

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University of Norway; & University of Konstanz and University of Reading)

Keywords: Heritage speakers, Rhetorical questions, Prosody, Italian, Bilingual acquisition

Italians form one of the largest migrant communities in Germany. Previous research showed that the grammar of Heritage Speakers (HSs) may differ from those of monolinguals. Combining information from different domains of language has been found to be particularly challenging for HSs (e.g., Kupisch & Rothman, 2016; Polinsky & Scontras, 2019).

The present study focuses on rhetorical questions (RQs). RQs are an interface phenomenon par excellence, understudied in HSs and language acquisition more generally. RQs are syntactically interrogatives but their pragmatic function is that of an assertion, which is used to signal the speaker’s attitude rather than requesting information (Biezma & Rawlins, 2017; Soriano, 2019). RQs can be distinguished from information-seeking questions (ISQs) through a variety of linguistic cues, including discourse particles, morphosyntax and prosody. These cues vary across languages.

The study examines the strategies that German-dominant HSs of Italian use to mark questions as rhetorical. We address the following questions: 1. Which prosodic and syntactic cues do HSs use in

Italian? 2. Do HSs use different cues compared to Italian monolinguals? 3. When compared to the cues that are used in German, can cross-linguistic influence be detected?

In a production task, participants were given RQ- and ISQ-eliciting contexts, together with a recorded model sentence, as in (1).

- (1) Ma chi lo mangia il melone? (RQ prosody)  
 But who CL.it eat-3SG the melon  
 ‘But who eats melon?!’

40 HSs (27 f:13 m, age=18-45, mean=27.7), 41 monolingual Italian (26 f: 15m, age=18-37, mean=25.9), and 41 monolingual German adults (28 f:13m, age=19-44, mean=26.3) took part in the study. A preliminary data inspection on Italian (20 HSs, 20 Italian monolinguals) shows similar patterns in the production of final contours in the two groups. RQs present falling or low edge tones (L% , HL%), whereas ISQs were produced with a high or rising final contour (H%, LH%). An extensive prosodic analysis will also consider pitch accents using the ToBI system (Grice & Baumann, 2002; Grice et al., 2005, Gili Fivela et al., 2015), as well as other phonetic factors, such as voice quality and duration.

Additionally, participants often used specific lexical and syntactic cues to mark RQs. The most frequent is the counter-expectational particle *ma* ‘but’, present in around 50% of the sentences. Both groups used also clitic right dislocations, cleft structures and the reflexive pronoun *si*. Only monolinguals produced questions with the verb in the conditional and the particle *mai* (e.g., *Chi mangerebbe mai...* ‘Who would ever eat...’). ISQs were rarely marked by additional cues, the most frequent being right dislocation and cleft structures, used in less than 5% of the sentences.

In our final analysis, a comparison between the heritage and the majority language will provide information on different coding strategies and potential cross-linguistic influence in HSs. Additional tasks and a background questionnaire control for factors such as length of exposure, language use, proficiency and irony comprehension. Our study will shed light on the HS variety of Italian spoken in Germany as well as on RQs, an understudied phenomenon in language acquisition.

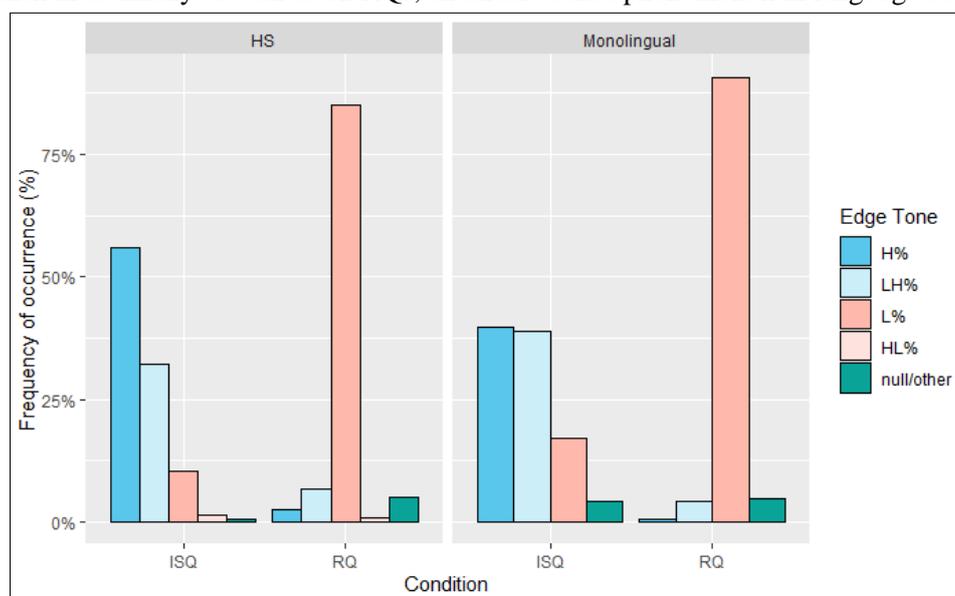


Figure 1. Proportion of edge tones in Italian information-seeking (ISQ) and rhetorical questions (RQ) by Heritage Speakers and monolinguals.

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## Cues of dialect attrition in Italian-Argentinian speakers

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Keywords: language contact, language attrition, heritage speakers, Italian-Argentinian migrants, Calabrian dialects

This study aims at detecting specific outcomes of language contact in first-generation Italian migrants' speech. The selected migrant group (twenty Italian-Argentinians, 11 women and 9 men, aged 69-88) comes from Central-South Calabria and has been living in Argentina since 1946-1960, therefore it can be referred to as a sample of multilingual speakers whose linguistic repertoire involves at least: a heritage language (Calabrian dialects) as mother tongue; Calabrian regional standard of Italian; Argentinian Spanish being the language of their host country.

From a chronological perspective, Calabrian dialects are informants' L1; nevertheless, Spanish has turned to be the dominant code across their life span both in private and public domains (Benmamoun, Montrul, Polinsky 2013, Nagy, 2011, Turchetta, Mori, Ranucci 2005, Turchetta 2020, and Vedovelli 2011). Consequently, an attrition process of their linguistic competence in Calabrian dialects may be envisaged (Frontera 2020, and Schmid, Köpke 2019). In order to focus on some marked phonological, morphological and morpho-syntactic traits featuring Area 3 of the Calabria region (Trumper 1997) a semi-guided translation task of 15 sentences from Spanish or Italian oral stimuli was proposed. Cross-speaker realisations into local dialects will be analysed to discuss variational patterns of:

- a) the contextual allophone of /f/ in initial and intervocalic position which turns to be glottalized e.g. [ha'mig:ja] (*family*) (Falcone 1976, Rohlf's 1966, and Trumper 1997);
- b) the enclitic possessive for singular forms, e.g. *sorma* vs. *i soru mie* (*my sister, my sisters*) (Falcone 1976, and Krefeld 2007);

c) the periphrastic infinitive constructions using the modal particles *ma/mu/u* + V, e.g. *hai ma/mu/u chiudi a porta* (you have to close the door) (Damonte 2009, Ledgeway 1998, and Trumper 1997). Data will be described in order to provide a quantitative outline of variants and a qualitative interpretation via a multi-factor descriptive approach, so as to explain the role of sociolinguistic variability, universal trends, interference phenomena and innovations in a heritage language scenario.

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## Using corpus data to map phonological patterns in Brazilian Veneto

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Keywords: Brazilian Veneto, Talian, corpus, metaphony, high vowel

**Overview.** Metaphony targeting upper mid vowels /e, o/ is a characteristic of Central Veneto (e.g., Zamboni 1974, Belloni 2009, Walker 2010, Perrone 2016), a dialect of Veneto spoken in northeastern Italy. In a closely related understudied dialect spoken in southern Brazil, namely Brazilian Veneto (locally known as Talian), metaphony is also observed (Frosi and Mioranza 1983). Although the phenomenon is reported as variable for both dialects, little is known about how such variation is structured. In this paper, we describe how we have developed a corpus of Talian, and how we use said

corpus to explore the structural conditioning of metaphony in the language. We show that metaphony in this dialect is asymmetrical, as it applies at different rates for /e, o/.

**Background and methods.** In Talian, like in Central Veneto, stressed /e, o/ variably raise to [i, u] when followed by unstressed /i/. The phenomenon targets all stress positions (1), and it is morphologically conditioned, since the trigger is a separate morpheme (a plural marker or verbal inflection). In antepenultimate position (1b), the unstressed vowel in penultimate position also raises. In final position (1c), metaphony precedes resyllabification.

- |     |     |                   |             |
|-----|-----|-------------------|-------------|
| (1) | (a) | óv-i ~ úv-i       | ‘egg.PL’    |
|     |     | bév-i ~ bív-i     | ‘drink.2PS’ |
|     | (b) | zóven-i ~ zúvin-i | ‘young.PL’  |
|     | (c) | fazó-i ~ fazú-i   | ‘bean.PL’   |

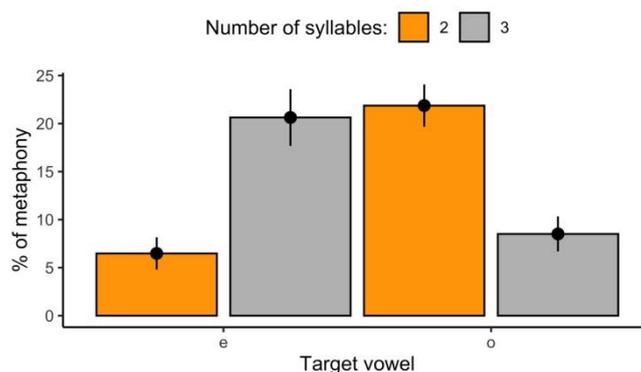
To examine how widespread metaphony is in the language and which linguistic factors condition it, we analyze data from a newly created corpus of written narratives in Talian (the Talian Corpus). Our corpus contains narratives extracted from books and newspapers written by different Talian-speaking authors ( $n = 20$ ). Since Talian has no standardized orthography, orthographic variation may reflect at least in part variation in the authors’ spoken language. Therefore, if a given author writes *uvi* as opposed to *ovi* ‘egg.PL’, we assume that said author may regularly produce metaphony in his/her speech, or that he/she identifies metaphony as part of the Talian grammar.

For the development of the corpus, the narratives were digitized (OCR, optical character recognition) using Google’s Tesseract (Smith 2007), and later coded for a wide range of phonological variables in R (R Core Team 2020), including broad IPA transcription and syllabification. In its current state, the corpus contains 103,046 words and 8,589 sentences.

For the present study, we initially extracted from the corpus all polysyllabic words ending in /i/ with an underlying /e, o/ in stressed position ( $n = 1,462$ ). Given the low number of tokens with antepenultimate or final stress, we focus on 2- and 3-syllable words with penultimate stress ( $n = 992$ ;  $n$  (unique) = 300). Examples include items such as *sentì* ‘feel.2PS’, *amori* ‘love.PL’, *ovi* ‘egg.PL’, *corri* ‘run.2PS’, and *cagneti* ‘dog.DIM.PL’, with or without metaphony.

**Results and discussion.** Figure 1 shows that target vowel and word length interact: while /o/ raises more often in 2-syllable words (22% vs 8.5%), /e/ raises more often in 3-syllable words (20% vs 6.5%). This interaction is statistically confirmed in a mixed-effects logistic model containing a by-author random intercept ( $\hat{\beta} = -4.0113$ , 95% CI = [-5.1, -2.9],  $p < 0.0001$ ). Additional predictors, such as onset and coda of target syllable and onset of trigger syllable, showed no statistical effect.

**Figure 1.** Percentage of metaphony by target vowel and word length.



The vowel asymmetry seen in the data is potentially driven by multiple factors. One such factor is lexical statistics (e.g., Coetzee and Kawahara 2013): in our corpus, /o/ is more frequent in penultimate position in 2-syllable words than in 3-syllable words (36% vs 23%), the opposite of what we find for /e/ (37% vs 50%).

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## Italian in Transit: Attempting a definition on the basis of distribution and functions of generalized present infinitives

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Keywords: Italian-speaking communities abroad, language contact, Italian learner varieties, acquisition of the verb system, present infinitive

This paper provides a description of a continuum from basic to advanced varieties of the Italian language which we have subsumed under the label “Italian in Transit” (IiT). IiT-competences are acquired by multilingual migrants and refugees along their migration or escape routes in Italy and are occasionally reactivated by them after moving into new places of residence. The GörliPark corpus consists of fifteen interviews conducted with IiT-speakers who come from sub-Saharan West Africa and work as street vendors in a Berlin park (Germany). A preliminary analysis of sentence negation (Bernini 2005) shows that all participants speak basic up to post-basic Italian learner varieties.

The generalization of the present infinitive (INFp) constitutes a shared fossilized feature in eleven examined interviews. Sociolinguistically, the overall frequency of this mood/tense—which is not justified by its distribution in Standard Italian (Bertinetto 2003) and is scarcely attested in other learner varieties naturalistically acquired in the peninsula (Berretta 1990, and Banfi and Bernini 2003)—is possibly related to the fact that the participants untutoredly acquired IiT-skills at their workplace, being addressed in simplified varieties of Italian foreigner talk (Berruto 1993). Generalized

INFps constitute the unmarked verb form to be used in imperfective/non-past contexts in several Italian-based contact languages developed in highly multilingual settings outside the peninsula (e.g., Operstein 2018, Banti 1990, and Berruto 1991, 2012). However, a qualitative analysis of their contexts of occurrence highlights that, in our dataset, generalized INFps show morphological, semantic, and pragmatic peculiarities.

First, INFps tend to be generalized instead of past tenses (as opposed to present tenses) and to have a perfect (as opposed to aoristic) value. A morphological comparison of their types shows that the majority of generalized INFps in our corpus are regularly derived from the third person singular of the present indicative (INDp), while verbs generalized in past constructions are mostly irregularly built. Their morphological higher transparency—along with the fact that the IiT verb morphology is more complex than in the bipartite verb system of numerous Italian contact varieties—partially explains why INFps tend to be specifically used for reporting past events, presented by IiT-speakers as having persisting effects at the enunciation time.

Second, analogously to Italian learner varieties (Berretta 1990), generalized INFps in IiT often occur in propositions marked as IRREALIS, such as negative and/or subordinate clauses, and with durative verb phrases. These semantic properties are strictly interrelated with the informational status of their host utterances. Thus, the switch from the compound past indicative (INDcp) to the INFp in ex. (1) marks a shift between an action presented as punctual to one prolonged over time. Simultaneously, the tense alternation highlights a contrast between two foreground(ed) and a background(ed) events.

- (1) G16:    ho visto te                                *guardare* così                ho detto  
               ‘I have seen\_INDcp you                to look\_INFp at so            I have said\_INDcp  
               lui non è Germania  
               he is\_INDP not Germany’

Consequently, generalized INFps—or, more specifically, their alternation with other moods/tenses—are sometimes innovatively employed by IiT-speakers to hierarchize different types of information, especially in narrative sequences.

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## Standardization of neostandard Italian abroad

Silvia Natale and Stefania Marzo

This paper investigates the role of geographic and virtual mobility on the *coherence* (Guy & Hinskens 2016) of the linguistic repertoire of Italian migrants.

With the onset of the economic crisis in 2008, a new Italian emigration wave was initiated. For the first time in Italy's long history of migration it increasingly includes a relatively high number of qualified workers defined as *cervelli in fuga*. They have been generally educated in the national language, which since the 1980s in Italy is represented by the so-called neostandard (for informal speech) and standard Italian (for formal and academic written language) (cf. Berruto 2012).

In this paper we compare the neostandard variety spoken by these new Italian migrants with neostandard used in Italy by speakers with a comparable sociocultural background (university degree, international social networks, employment in highly qualified settings). We argue that the high level of geographical and virtual mobility and the strong contacts with Italy make neostandard spoken abroad comparable with neostandard Italian spoken in Italy in terms of distribution and frequency of typical morphosyntactic features.

Our analysis is based on three datasets of informal semi-structured interviews recorded in Italy, Switzerland and Belgium.

We apply corpus linguistic and variationist sociolinguistic methods, to analyze the *coherence* (between different morpho-syntactic features of neo-standard Italian studied across two parameters, viz. geographic distance from Italy (Bern vs. Leuven) and *mobility* (Italy vs. Bern/Leuven). Our data show that these morphosyntactic features cluster in a similar way in terms of feature coherence. This highly similar coherence between the features in the three datasets proves that even under the “pressure” of international mobility neostandard features remain constant. It also points to a more or less stable standardization of neostandard Italian as the common informal speech norm of Italians.

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## Italian Heritage Speakers in Buenos Aires

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Keywords: Italian, Spanish, Buenos Aires, morphosyntax, language change

Between 1830-1950 vast streams of immigrants from all over Europe came to Argentina; most of these immigrants (approx. a total of 3.5 million) arrived from different parts of Italy and settled in the capital of Buenos Aires and its surrounding areas ([1], [2]). Albeit there are only 8.2% Italians of the Argentinean population today, more than 60% of Argentinians claim an Italian origin ([3]). Due to the historical context and the positive attitudes towards the Italian culture, many Italian organizations and community associations for language, cultural or commercial transmission have been founded and supported by the state ([4]). Besides social and cultural influences, we also find strong Italian influences in the modern variety of Buenos Aires-Spanish, called *Porteño*. As many previous studies have reported, *Porteño* Spanish exhibits considerable “Italian” influence in different levels, especially in lexicon and prosody (e.g., [5, 6, 7]). However, very little is known whether there are “Spanish” traces in Argentinean Italian of heritage speakers.

The current proposal aims to fill this gap (1) by examining whether and how the Italian language of heritage speakers in Argentina differs from the Italian spoken in Italy and (2) by discussing which morpho-syntactical phenomena are more prone to contact-induced change. The study examined three phenomena: the use of article, the clitic doubling and the acceptance of intervening subject in wh-questions. Although Spanish and Italian share very similar morpho-syntactic structures, there are some language-specific uses. For example, Spanish omits an article in certain contexts, whereas Italian does not (*\_\_Francia es un país lindo* vs. *La Francia è un paese bello*). Moreover, (ARG) Spanish has clitic doubling with indirect and direct objects, whereas Italian –with some dialectal exceptions– not (*Le di un regalo a mi madre*, *La conocí a tu hermana* vs. *\_\_Ho dato un regalo a mia madre*, *\_\_Ho conosciuta tua sorella*). Regarding wh-questions, both Spanish and Italian require subject inversion, but the acceptance may differ according to the type of subject and the type of wh-word.

In order to find out whether and how Italian HS differ from speakers in Italy, a small 5-Likert Scale online-experiment was run (May-June 2020), in which 60 Italian HS, 206 Argentineans, and 204 Italians as control groups participated. The experiment included 35 target items, 10 fillers and questions related to the linguistic biography of the speaker. All participants were recruited in social media and selected very strictly according to different criteria. The results reveal significant differences between heritage speakers and Italian speakers in all tested areas. Based on average differences (of the 5-Likert Scale) between the two groups, we find more discrepancy in the use of article (1.62), then in the use of indirect object (1.41), followed by the use of direct object (1.03) and finally in wh-questions (0.55).

This explorative paper hopes to contribute to a better understanding of the nature of heritage language itself and to the questions related to the methodological issues and language documentation of Italian heritage community in Buenos Aires that represent a very complex but unique language scenario.

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## Heritage Sardinian: a corpus-based study

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Keywords: Heritage Sardinian, Corpus-based Analysis, Language Contact phenomena

Despite the growing interest in the Italian heritage languages (cf. Bettoni and Rubino 1996, Haller 1997, Turchetta 2005, Prifti 2013, among others), a complete account of Sardinian varieties in migration contexts is still lacking. In particular, a corpus linguistic approach could be extremely useful to highlight the most recurrent features of language contact phenomena in the heritage scenarios.

This contribution aims at providing an in-depth description of Heritage Sardinian (hereinafter HS) lexical characteristics, focusing on:

- i) linguistically internal contact phenomena (code-switching, code-mixing, language attrition);
- ii) sociolinguistic layering of HS (communicative domains, positioning in linguistics repertoires among other linguistic varieties);
- iii) ideological value concerning HS maintenance (explicit judgements of speakers about HS, willing to preserve HS in second generations).

The analysis will take into account original data collected in the period 2008-2010 among Sardinian immigrants' communities in continental Italy and France, through standardized interviews completely conducted in Sardinian, in the form of a "semi-directive" conversation (namely a structured questionnaire which allows subjective digressions to the interviewed, cf. Grassi *et al.* 1997). Among the lexical features, three main areas will be taken into account:

- i) the use of standard Italian adverbs either discourse markers (1) or *-mente* adverbs (2):

(1) *dio*            *'ambiare*    *medas*    *'osas*, *però*    *putroppo*    non    si    podet  
 would    change    much.PL    things, but    unfortunately    not    CL    can.3SG  
 'I would change many things, but unfortunately it's not possible'

(2) *Nos*            *agiundant*    *cun....*    *economicamente*  
 us.CL    help.3PL    with    economically  
 'They help us...with...economically'

ii) the presence of fixed word combinations playing a different function:

(3) Sardegna est sempri bella *però per quanto riguarda* s'economia no ddu sciu  
Sardinia is always nice but for it concerns the economy not it know.1SG  
'Sardinia is always beautiful, but as far as its economy is concerned, I don't know'

(4) una chi seu dèpia andai *per forza* a foras  
one who be.1SG must.PPAST go for force to out  
'[I'm one] that has necessarily to go out'

iii) the presence of specialised or technical terms:

(5) chi fit guasi pròpiu un'ispèssia de *dinosauro o fossile*  
which was almost exactly a sort of dinosaur or fossil  
'which was almost exactly a sort of dinosaur or fossil'

Furthermore, as data clearly demonstrate, the phenomena occurring in the two alloglottic scenarios share similar features, that can be related to Sardinian typological peculiarities, differencing it from other Romance varieties.

#### Abbreviations

1 SG first person singular  
3SG third person singular  
CL clitic  
PPAST past participle

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### **'Amore it's a sweet word': Attitudes towards heritage languages amongst third generation Australian-Italian youth**

Antonia Rubino

While most linguistic research on the Italian diaspora worldwide has focused on the first and the second generation (e.g. Di Salvo and Moreno 2017), the third generation (i.e. those with parents born in the migration context) remains largely underresearched in spite of their growing numbers and their crucial role with regard to long-term language maintenance (Pauwels 2016).

In this paper I will first outline current perspectives in research amongst the third generation both within the Italian diaspora (e.g. Cavallaro 2010; De Fina 2012) and in other migrant communities (e.g. Goble 2016), pointing to the need to revisit the third generation's positioning within the migration experience and, relatedly, reconceptualise the notion of language shift. I will then present some findings of a project that explores the trilingualism (English, Italian and dialect) of third generation Australian-Italians, aged 18 to 30. The Italo-Australian context is characterized by high vitality and a relatively high intergenerational language transmission, as 44% of those reporting Italian home usage were born in Australia. The Italians in Australia are the second largest non-English speaking ethnic group, with over one million people reporting Italian ancestry in the latest (2016) Census and over 271,000 home speakers, representing the fifth most spoken home language in Australia (Australian Bureau of Statistics 2016).

The data come from a detailed online survey (224 respondents) exploring self-reported language use and competence, amongst other issues. In this presentation I focus on findings that relate to the young respondents' attitudes towards their heritage languages, both Italian and dialect. In particular, I explore the responses regarding (i) the likeability of each of the three languages present in their repertoire: English, Italian and dialect; (ii) attributing specific meanings to Italian and dialect; and (iii) giving examples of favourite Italian and/or dialect words and of language mixing. The detailed responses of these young people greatly enrich the quantitative findings, yielding insights into their attitudes towards their heritage languages, their multilingualism, their metalinguistic awareness, and to an extent also their everyday linguistic practices. Specifically, the findings point to more positive attitudes to Italian compared with dialect, and in broad terms to an ideology of 'flexible' multilingualism (Blackledge and Creese 2010) whereby the heritage languages are viewed as useful communicative resources that can be employed in creative ways.

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## **Language ideologies, attitudes and practices among Italian speakers in Croatia**

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Keywords: Italian as a minority language, language shift, language attitudes, language ideologies, code-switching

Geographical vicinity of Italy and Croatia and the history of the Venetian domination on the Eastern Adriatic coast were some of the main factors for centuries-long migrations between the two territories and a sustained presence of Italian speakers in different parts of the present-day Croatia. The Italians in Croatia are officially recognized as a national minority, but the speakers of Italian do not form a homogeneous group. The aim of the study is to compare two Italian-speaking groups in Croatia: the urban Zaratino community of Zadar in Dalmatia and the Italian-speaking community in the rural continental part of the country. Although the language of both is based on Venetian, they represent two types of minority language communities in that they were formed by different migrational patterns and interaction with host population in different historical periods and social circumstances. The impact of the mentioned differences in language external setting on language ideologies, attitudes and practices in the two groups has not been studied so far. The analysis is based on linguistic data and narratives collected between 2010 and 2017 by means of individual and group interviews, and (participant) observation in Zadar and Ciglenica. Regardless of numerous differences, considerable similarities can be discerned in the two communities. Code-switching as an important feature of their communicative practice is realized in two directions: a) between Croatian and Italian varieties, and b) between local / regional (archaic) variety of Italian and (modern) standard Italian. In both cases they present a very small portion in the total local population, which has been one of the triggers for their gradual but constant assimilation and the ensuing language shift. Besides, both groups are strongly influenced by standard language ideology, which has been negatively reflected on the maintenance of specific archaic and dialectal parts of their language repertoires.

## WORKSHOP 17

### Mountain linguistics

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Keywords: Linguistic diversity, language geography, language dynamics, language ecologies, mountains

Language use in mountainous areas often exhibits special dynamics (Urban 2020).

For some mountain regions of the world, these are rather well described. For instance, linguistic diversity in the Caucasus exists on the basis of “asymmetrical vertical bilingualism:” there is a social and economic division between transhumant pastoralist highlanders and lowlanders, who are agriculturalists and traders. Since markets and winter pastures are in the lowlands, highlanders typically learn lowland languages, but lowlanders do not learn highland languages (Nichols 2004, 2013, cf. Dobrushina 2013). Similar socioeconomic opposition between highlanders and lowlanders, with linguistic dimensions, are also in evidence in other mountain regions of the world (Scott 2009 for mainland Southeast Asia, Urban forthcoming for the Central Andes). However, for other mountain areas of the world, detailed sociolinguistic and anthropological descriptions of the conditions on which language use is predicated are thin on the ground.

Accumulated over long time, such patterns of use yield particular –often discontinuous and dense– distributions of languages and language families in geographical space, with rich linguistic diversity in many (e.g. the Caucasus and the Himalayas, cf. Comrie 2008, Turin 2017), but not all mountain areas (e.g. the Altai). In addition, in some parts of the world, linguistic diversity tends to build up at the foots of mountain areas more than in the mountains themselves (e.g. MacEachern 2003). Perhaps for this reason, large-scale quantitative comparative studies (Axelsen and Manrubia 2014, Hua et al. 2019) reach contradictory results on the relationship between mountain environments and linguistic diversity.

Furthermore, it is conventional wisdom that languages spoken in peripheral, inaccessible areas such as mountains tend towards conservatism (e.g. Mańczak 1988) and the maintenance or even further accrument of complex structures (Baechler 2016, Nichols 2013, 2015, 2016, Bentz 2018). This is often attributed to sociolinguistic isolation and the resulting inward-looking “esoteric” orientation of speech communities. Since the precise characteristics of language geography and language typology in mountain areas therefore also depend on prevailing local sociolinguistic and socioeconomic conditions, rich sociolinguistic work is vital for modelling and understanding language distributions and structures.

Finally, more direct influences of the environment on language structures at high altitudes have been proposed as well (Everett 2013).

In sum, there is a rich set of factors that potentially interact in bringing about geographical and structural linguistic distributions in mountain areas. Understanding these dynamics systemically is as challenging as exciting.

Research communities who specialize on different mountain regions of the world are usually not in interaction with one another on these topics. The result is that broader commonalities as well as differences between different high-altitude areas of the world remain poorly understood, to the detriment of higher-level theorizing. Also, researchers engaged in large-scale quantitative work on

language geography and diversity are not usually in touch with any of these communities, but could benefit from the on-ground experience of descriptive and historical linguists in fine-tuning models and explanatory frameworks for their findings.

This workshop aims to provide a forum for exchange, interaction and knowledge exchange between these different communities, with the overarching aim to gain a better general understanding of the linguistics of mountain areas in all its interdependent aspects. Contributions addressing the following topics are welcome, but the list is not exhaustive:

- How does the mountain environment and socioeconomic organization in mountain areas influence patterns of bi- and multilingualism and language attitudes?
- How does the integration of mountain areas into national states and economies influence or disrupt traditional patterns of language use?
- How do such patterns of usage and attitude influence language geography in the long run in diachronic terms? What are the dynamics of language spread or spread of innovations within languages/dialects (e.g. uphill, downhill, or transversal), and how does this relate to language use?
- What broader patterns of language distribution in mountains are there, and how are they generated? E.g., is there a correlation between language boundaries and boundaries of ecozones? Are languages spoken in discontinuous enclaves, and how can we account for this diachronically?
- How can overall levels of linguistic diversity/language density and different mountain areas of the world be best explained? What drives high or low diversity in mountains, and what drives high or low diversity in the surrounding lowlands?
- How can such detailed sociolinguistic or anthropological descriptions of language ecologies in mountain areas most fruitfully inform or refine quantitative modelling of language diversity and language density?
- Can claims as to special structural-typological characteristics of languages spoken at high altitudes be corroborated on a worldwide comparative basis, and are there more such characteristics that have not yet been discussed widely? If so, are the characteristics best accounted for by social/sociolinguistic or directly environmental factors, and how do we decide between these explanatory options methodologically?
- How is the notion “mountain” or “mountain area”, which is left deliberately vague here, best defined for linguistic purposes?
- In addition to papers addressing these questions, contributions that survey mountain areas on a general level with regard to language use, language geography, and language history, especially areas where these are not widely discussed in print (e.g. the Altai, the Hindukush), are highly welcome, too.

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## **Mountains, rivers, and word orders of numeral bases and classifiers in Tibeto-Burman**

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Keywords: Mountain, word order, numeral base, numeral classifier, Tibeto-Burman

In this study we highlight the relevance of mountain linguistics in India's North-East mountain areas and provide the results of a survey of the numeral systems and numeral classifier systems of 575 languages in six language groups: Sinitic, Miao-Yao, Austroasiatic, Tibeto-Burman, Tai-Kadai, and Indo-Aryan. In a complex numeral with a multiplicative composition, the base either follows the multiplier, i.e., [n × base], dubbed 'base-final', e.g., *sān bǎi* (three hundred) 'three hundred' in Mandarin, or precedes the multiplier, thus [base × n], or 'base-initial' (refer to Allasonnière-Tang et al 2020 for a full typological survey). Likewise, in numeral classifier languages, a classifier (CLF) that highlights an inherent feature of the referent either precedes or follows a numeral, hence 'CLF-initial' or 'CLF-final'. Mandarin, for example, is base-final and CLF-final, e.g., *sān bǎi zhī gǒu* (three hundred CLF.ANIMAL dog) 'three hundred dogs'.

The word orders of numeral bases and numeral classifiers are highly synchronised in our sample, as base-final and CLF-final are the dominant orders, except for a small group of Tibeto-Burman (TB) languages concentrated in the mountainous areas between India and Myanmar, with a few others located sporadically at the southern edge of the Tibetan Plateau. This scenario suggests a gradual process of contact-induced changes based on the dynamics of mountain linguistics (Her et al 2019, Urban 2020). Tibeto-Burman had base-initial numerals and no classifiers initially, but seem to have gradually acquired classifiers and adopted the base-final orders due to contact with neighbouring base-final and CLF-final languages, which are politically, socially, and economically prominent, while the more isolated languages in mountain areas would have been more protected geographically and retained the indigenous word orders.

To assess such a hypothesis, we extract the altitude (Derungs et al 2018) for each language based on Glottolog locations (Hammarström et al 2020). Then, we use machine learning methods of regression (Kuznetsova et al 2017, Bürkner 2018) and classification (Therneau and Atkinson 2019) to assess the predictive power of altitude on the word orders of bases and classifiers. The results show that altitude by itself is sufficient to predict the word orders in numeral constructions in these languages with a performance above random and majority baseline. We also test additional variables that seem relevant to language isolation, including terrain surface roughness (measured as the standard deviation of altitude within a given radius), distance to river, and language density in the area. We show that each of these factors can predict the occurrence of base-final and CLF-final orders with similar performances over random and majority baselines. We also look forward to feedback from the audience to test additional variables.

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## Mountain linguistics: The Western Alpine Landscape

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Keywords: Corpus Linguistics; Minority Languages; Language shift; Alpine Area; Language Contact;

The project “Corpus linguistics meets Alpine cultural heritage: documenting and safeguarding linguistic minorities in the Alps” aims at investigating the Germanic (Walser) and Romance (Franco-Provençal and Occitan) minority languages of Piedmont and Aosta Valley, using the tools made available by Corpus and Digital Linguistics. These Western Alpine varieties are exposed to different degrees of isolation from the Romance and Germanic roof languages: threatened by processes of depopulation and decay (above all, the Walser ones, cf. Dal Negro 2004, Zürrer 2009), these varieties are in many cases highly influenced by the surrounding national languages or dialects (Gaeta & Seiler 2021). Isolated for a long time (Baechler 2016), they constitute an interesting case of study for Mountain Linguistics (Urban 2020), especially because of their homogeneous common ground centering on the so-called central crest-mountain landscape (Nichols 2015).

Our contribution aims at analyzing how the methodological premises of Mountain Linguistics can be applied to the (socio-linguistic and cultural) investigation of the Western Alpine landscape. On the one side, this area exhibits a great linguistic variety and specific cultural and anthropological features that need to be preserved and protected in line with the UNESCO 2003 convention. On the other, the Western Alpine zone can be regarded as belonging to a typically European cultural context in which locally defined traits have interacted with different national roofing languages and cultures (Gaeta 2017).

On a first examination, a number of topics appear to be of a certain significance and will be briefly outlined in our contribution with the help of specific case-studies.

- (1) First, with regard to the patterns of distribution and diffusion of languages and linguistic variation in Western Alps at least three different scenarios are likely to be applied: a) widening and spread across horizontal-latitudinal lines, b) vertical diffusion according to the so-called “Alpwirtschaft” model, c) expansion along transit routes like the Alpine passes.
- (2) Second, with regard to the socio-political and sociolinguistic opposition between plain and mountain areas we were able to detect remarkable differences between the Germanic-speaking and the Romance-speaking regions which allowed us to make some relevant points on the

notion of “linguistic island and isolated community” as well as on the interplay between linguistic conservatism and innovation.

- (3) Third and finally, with regard to the possibility of describing linguistic features and events across the Western Alps on a cross-linguistic and cross-dialectal basis we focused on relevant topics for the Alpine dimension relating specifically to a) spatial deixis, b) peculiar phonological innovations and c) lexical items linked to the local and most prominent anthropological activities and dimensions such as pasture, food-production, housing, and the like.

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Language altitude and language size

Michael Daniel & Alexey Koshevoy  
<not updated>

A frequency-based approach to exploring potential effects of ambient air pressure reduction on ease of articulation

Caleb Everett  
<not updated>

## Small-scale convergence in the Hindu Kush mountain area

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Keywords: areal typology, diffusion, geomorphic coding, Hindu Kush, micro-areas

The Hindu Kush mountain area, situated at the crossroads of South and Central Asia, displays high language density as well as a high level of linguistic diversity (including Indo-Aryan, Iranian, Nuristani, Sino-Tibetan, Turkic and Burushaski). It has been described as a distinct linguistic area (Toporov 1970; Èdel'man 1980; Bashir 2016), alternatively as transitional between two larger linguistic areas (Tikkanen 2008), or as an accretion zone (Nichols 1992: 21).

The present study attempts at shedding light on the finer details of the region's linguistic geography. Primary data was gathered from a tight sample of 59 language varieties. The data set was coded for 80 structural properties, covering morphosyntax, lexico-semantics and phonology, and subsequently analysed for their phylogenetic and geographical distributions. Two observations were particularly significant: First, only a small number of properties are shared by most or a substantial part of the languages in the region. This poses problems for viewing it as a distinct linguistic area vis-à-vis surrounding areas, although certain properties cluster in the central parts of the region. Second, a pattern emerges of a handful of distinct micro-areas within the Hindu Kush, each characterized by substantial feature sharing. Some of those micro-areas are phylogenetically heterogeneous (e.g. an Eastern Hindu Kush micro-area involving the isolate Burushaski and a number of Indo-Aryan languages), while others are phylogenetically rather more homogeneous but diverge typologically from related languages outside the region.

Preliminary analysis suggests that such micro-areas are the product of multiple, small-scale relationships between local communities (Koptjevskaja-Tamm & Wälchli 2001: 728), rather than being propelled by a major lingua franca or by any substantial level of structural bilingualism. The Hindu Kush micro-areas overlap surprisingly well with areas of comparable size, previously identified in anthropological-historical research as “geo-cultural regions” (Cacopardo & Cacopardo 2001: 17). The latter are characterized by a shared social, cultural and religious identity, often in contrast to surrounding lowland cultures.

This correlation between linguistic feature sharing and a common cultural and geophysical context is especially evident in a Western Hindu Kush micro-area (Liljegren & Svärd 2017). This part of the Hindu Kush withstood for the longest time conversion to Islam and held on to a distinctly pre-Islamic world view and cultural practices, well into the 18<sup>th</sup> century, in some cases longer (Cacopardo & Cacopardo 2001: 25, 249–250; Klimburg 2008; Jettmar 1975: 394; Jones 1974: 168). The centre of diffusion appears to be Nuristan (situated in the remotest and most rugged part of northeastern Afghanistan) and the Nuristani languages, but in various ways involving adjacent language communities across phylogenetic boundaries. A salient feature is the use of fine-grained geomorphic spatial coding that takes features of the “alpine” environment as its primary frame of reference (Heegård & Liljegren 2018). Such a system is particularly complex and specialized in Nuristani Prasun with its 39 directional affixes that indicate location and direction of an entity in relation to the flow of the river, the degree of deviation from the horizontal plane, and relative distance (Buddruss & Degener 2017: 449–482).

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## **On the correlation between phoneme inventory size and elevation: the case of Dagestan**

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Keywords: phoneme inventories, linguistic typology, language-environment interface, elevation, East Caucasian languages

In this talk I would like to merge two highly controversial research topics. The first one is the connection of language diversity to physical environment (Bentz, Dediu, Verkerk, & Jäger, 2018; Everett, 2013; Regier, Carstensen, & Kemp, 2016; Urban, 2020). The second one is a prediction of phonological inventory size (Donohue & Nichols, 2011; Hay & Bauer, 2007; Maddieson, 2013; Moran, McCloy, & Wright, 2012; Wichmann, Rama, & Holman, 2011). In this talk I will present the correlation between phoneme inventory size and elevation found in languages of Dagestan.

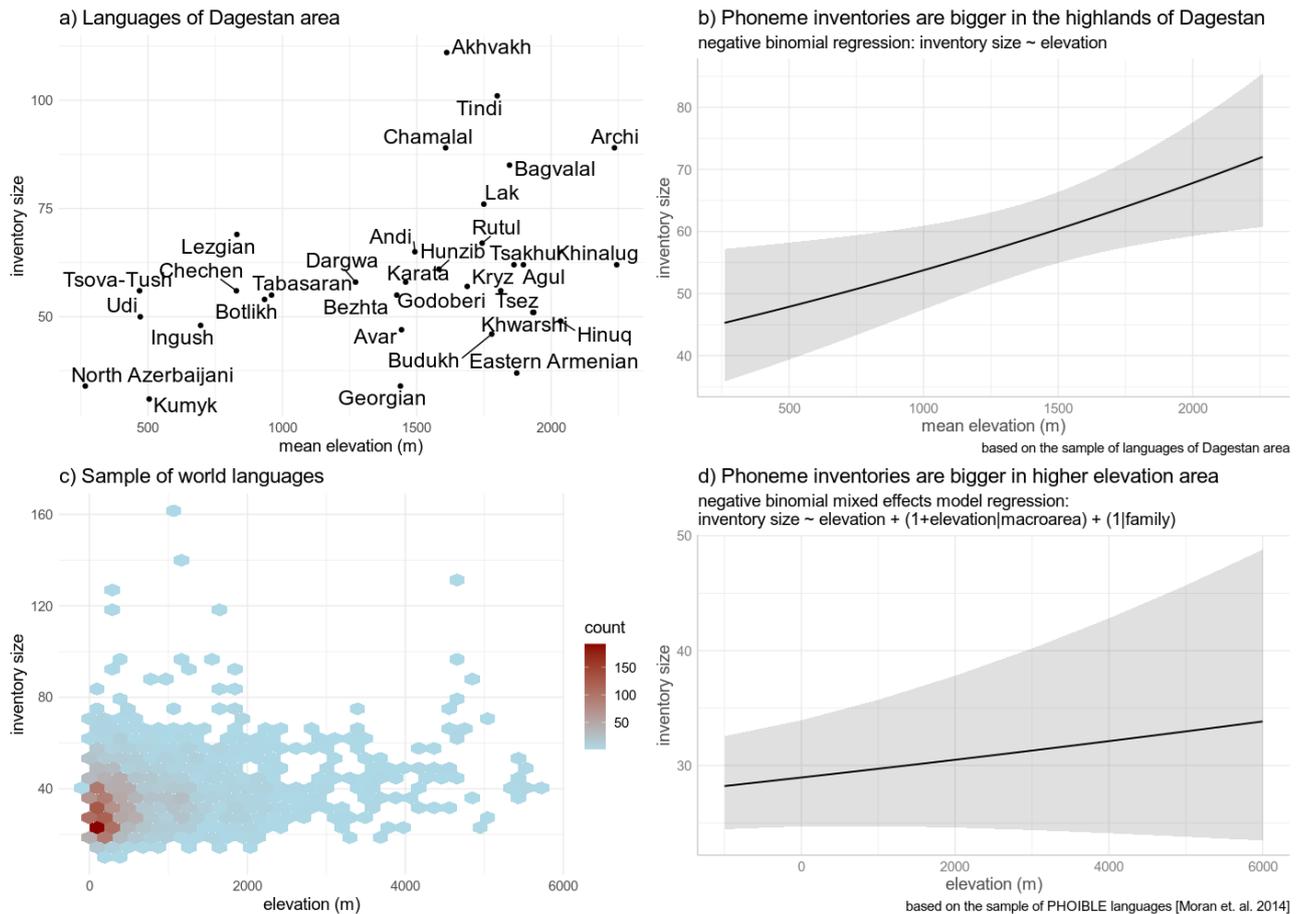
In most typological studies, languages are represented with some idiosyncratically selected point. It is not important for the most cases, but it is crucial for research on the connection between linguistic properties and physical environment. For the purposes of this study, I analyzed all historical

settlements of Dagestan, Chechnya and Ingushetia, and calculated the mean elevation for each language. Elevation for this data was retrieved using the GLOBE digital elevation model from the National Centers for Environmental Information. The obtained data are presented in Fig. 1a. I decided to evaluate a negative binomial regression model in order to obtain an exact formula for the observed relation between the number of phonemes and mean elevation. Elevation appeared to be a statistically significant variable. The overall predictions of our model are presented in Fig. 1b, with an estimated value and a 95% confidence interval. I also decided to compare the obtained results with overall trends from languages of the world. In order to do so I used data from the PHOIBLE database (Moran, McCloy, & Wright, 2014). This data are less precise than our data for East Caucasian languages since each language in the PHOIBLE dataset corresponds with only one pair of latitude and longitude coordinates. Unfortunately, there is no any dataset that contain all historical settlements of the all languages of the world, so it is the only approximation we can get. Elevation for this data was also retrieved using the GLOBE digital elevation model from the National Centers for Environmental Information. A negative binomial mixed effects model showed that elevation is not a significant predictor of phoneme inventory size for these data (Fig. 1c and 1d).

As a result, I discovered a local effect in Dagestan that should be compared with other mountain areas (see e. g. affricate-rich languages in the Eastern Himalayan and in the Hindukush linguistic areas (Nikolaev & Grossman, 2018)). If they show similar results, it would confirm Johanna Nichols' (2013) hypothesis that mountain areas provide isolation and "isolation favors complexity".

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## Mountain river thinking: Verticality and language stacks

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Keywords: linguistic complexity, altitude, sociolinguistic isolation, linguistic geography, mountain languages

Correlations of linguistic complexity with altitude have been demonstrated and shown to be due not directly to elevation but to the sociolinguistic isolation (in the sense of Trudgill 2001) of many high mountain villages (Nichols 2013, Nichols & Bentz 2019; but see Urban & Moran 2021). However, there is a good deal of variation, many local exceptions, and statistical noise. In large part this is because sheer altitude is not the only factor involved. Climate is not uniform across altitudes, even in the same mountain range; differences of soil type and south vs. north slope affect pasture and crop quality, temperature, precipitation, growing season, and thus economic importance. Needed are locally attuned measures of geographical position that improve on simple elevation, and more precise measures of complexity that have been tested and shown to be crosslinguistically useful.

I measure several different kinds of such complexity (phonological and morphological

enumerative complexity, three measures of inflectional morphological transparency; survey of word formation complexity underway with results expected by early July) for each language in vertical order from lowlands to highest highlands, along seven vertical stacks on six different river courses in the central and eastern Caucasus, two in the Himalayas, and two in the Andean periphery. (The situation is different in the central Andean core, where where economic power spread from the highlands and the directionality of vertical stacks is reversed. Also, those reverse-vertical stacks are too short for meaningful correlations.)

Overall there is good correlation between vertical position in stacks and relative complexity: languages in higher positions are more complex. This is the case within each stack, regardless of the absolute altitude of the highest and lowest members and the absolute complexity levels. Absolute altitude ranges and absolute complexity levels differ from stack to stack, and this explains why correlations based on more than one stack at a time are noisy or indeterminate. In some cases, something of the sociolinguistic history along the stack is known or can be inferred, and in such cases the correlation reflects two kinds of sociolinguistic situations: a language lower in the stack has undergone spread, and/or a language high in the stack has a long history of sociolinguistic isolation. Departure of an individual language from the trend can often be traced to a strictly local sociohistorical factor. The length of a stack (measured in number of different languages) seems to correlate partly with the age of the economic network involved and ages of language spreads along network connections. Stacks in the Caucasus are long and known to be old. The short Andean ones may not long antedate the Quechuan spread.

Worldwide comparison is still confounded by the fact that inheritance is an important factor in complexity. River-specific surveys often involve just one family, removing the obstacle. Stack order also removes the need to peg each language to a single point as when determining altitude or overland distances.

These findings confirm the importance of rivers in structuring language distributions pointed out in Muysken & van Gijn 2015.

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HSE University, Russian Federation; Words, Bones, Genes, Tools, University of Tübingen.

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## Edo North: Refugium and micro-accretion zone

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Keywords: Edoid, lexical variation, micro-accretion zone, mountain linguistics, refugium

High altitude locations continue to draw attention to complex relationships between geography and language (Nichols 1992, Urban 2020), although landform configuration also requires attention (Huisman, Majid and van Hout 2019). Across Africa, macro-areas not necessarily of high altitude have been identified (Güldemann 2010, 2011); micro-areas much less so (Good 2013). For this paper we assess Edo North, a micro-area stretching over 750 km<sup>2</sup> in south-central Nigeria that is dominated by the Igarra Formation. It shows outcrops of Cretaceous rock shaped as whaleback domes and tors reaching 2100 FASL at central point relative to 90-100 immediately north at Niger-Benue confluence and south in transition rainforest/savanna (Hockey et al. 1986).

Its perimeter reveals river ways on east (Niger) and west (Osse), while additional waterways flow through the center (Onyami) or along expanses in north (Ubo) and south (Orle-Edion). Across 180+ villages some 20 odd Edoid languages of contrasting phonological and morphosyntactic character are spoken, while near central highpoint is the Eбира variety of Nupoid. Language density in upland areas, by one count (Lewis 2015), approximates 1 per 12 km<sup>2</sup>. Along a 40 km path from central point northward to the Osos escarpment there are six distinct Edoid languages, several in adjacent villages. Across northern stretches Uneme-speaking iron-smiths occupy or share villages at escarpment entry ways. Their vernaculars align with rainforest Edoid farther south. No lingua franca of indigenous origin dominates, although multilingualism is prevalent, and since 1960 Nigerian Pidgin has expanded.

Linguistic features in Edo North distribute asymmetrically, with significant east-west and north-south dimensions. Phonologically we find near its center a complex array of consonants not otherwise found in Edoid, including liquids and nasals with fortis/lenis or breathy voice phonation type (Elugbe 1989). Oral vowels dominate, although nasal vowels occur at western and southern edges, seemingly under Yoruba influence. Tone systems contrast high vs. low, with downstep addition in more southerly areas and mid tone west of center. Morphosyntactically, nominal form classes marked by singular/plural prefixes prevail upland, defining up to 25 declension sets. Restricted to the same northern uplands is agreement by prefix within noun and verb phrase. Although basic Swadesh-type collections support Edoid status (Elugbe 1973, Lewis 2013), lexical variation typifies key land-related terms (HILL/MOUNTAIN, RIVER, STONE) but not others (TREE, WATER). Variation is greatest for HILL/MOUNTAIN (*égè/étè*, *ókò/íkhóshè*, *ókpa/ákpàké*, *ónà*) and STONE (*ésè/éfé*, *údò/údu*, *égbà*, *írásíà*), less so for RIVER (*úkè/óke*, *édà/édè*, *óbò*) and least for TREE (*ékà/éhā*) and WATER (*àmè*). As for their distribution, three geographically-defined routes of dispersal are identifiable. One extends from northeast uplands via central point to the Onyami River then directly west for HILL/MOUNTAIN *égè/étè*, RIVER *úkè/óke*, and STONE *ésè/éfé*. A second extends along the southern Orle-Edion river complex for HILL/MOUNTAIN *ókò/íkhóshè*, RIVER *édà/édè*, and STONE *údò/údu*. A third, confined to northwest and central uplands, holds for HILL/MOUNTAIN *ónà*, RIVER *óbò*, and STONE *írásíà*. We conclude by considering how lexical distributions along with oral tradition favor Edoid migration from the northeast toward the southwest prior to slave raiding disruptions of the 1800s and earlier.

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## WORKSHOP 18

### **The syntax of argument structure alternations across frameworks - SAS21**

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Keywords: syntax, argument structure, alternations, information structure, event structure

Argument structure and argument structure alternations have been a crucial area of investigation in generative linguistics since its inception, carrying implications for our understanding of the overall architecture of grammar per se and the issues related to the nature of the relation between the lexicon and syntax in particular (Levin 1993, Levin & Rappaport Hovav 2005; see also Ramchand 2013 for a general overview). The answers given to questions related to argument structure alternations, such as, for instance, whether the two alternating frames have the same or different semantics, i.e., whether they are merely thematic paraphrases of each other as opposed to being truth-conditionally distinct, have had wide-ranging implications, often determining one's position on the nature of said alternations, one's analysis thereof and, not infrequently, one's views on the clausal architecture underlying the alternation. Thus, for instance, whether one believes the Double Object construction (DOC) and the Prepositional Dative construction (PP Dative) to instantiate the same meaning or takes them to each encode a distinct semantics, often determined how these alternations are analyzed further. While the proponents of the monosemy/thematic paraphrases view often take the position that one of the alternating frames derives from the other (Larson 1988, Aoun and Li 1989, Baker 1997), the proponents of the polysemy view assume that the two constructions encode different semantic relations – change of possession for the DOC and movement to a goal for a PP Dative (Jackendoff 1990, Pesetsky 1995, Goldberg 1995, Harley 1995). Finally, in addition to these two positions, a third one exists which argues that the choice between the two constructions is more probabilistic and comes down to which construction is licensed in a given discourse context. Thus, while perhaps most naturally aligned with the monosemy/thematic paraphrase view (Bresnan et al. 2007, Bresnan and Nikitina 2009), this latter information structure view has nevertheless been argued to also be mostly compatible with the polysemy/alternative projection view (Krifka 2004).

While the monosemy/derivational view has been made prominent in accounts such as Larson (1988, 1990), (recast in Minimalist terms in Larson 2014), Baker (1988), and much work in Relational Grammar, the polysemy view appears to have enjoyed a somewhat wider overall popularity in the field in recent years (Bruening 2001, 2018, Dowty 1990, Hale & Keyser 2000, Harley 2002, 2007, Pesetsky 1995, Ramchand 2008). Accounts of arguments structure and argument structure alternations couched within the framework of the increasingly popular Distributed Morphology (Halle and Marantz 1993, 1994, Marantz 1997, 2013, Harley & Noyer 1999, Embick 2004a, b) in particular seem to favor, almost by default, the view on which each 'alternating' frame is built in the syntax rather than deriving one frame from the other (despite the fact that the framework itself is arguably fully compatible with and quite amenable to the possibility of deriving one 'alternating frame' from the other). Finally, the last two decades have witnessed the appearance of many attempts to sever arguments from the verb (Marantz 1984, Kratzer 1996, Borer 2005, Lohndal 2012, Wood & Marantz 2016, among others), with the most extreme position in this respect being that the only argument of the verb is the event variable, with all other arguments being added in the syntax (Schein 1993, Borer 2005).

Interestingly though, a rather significant number of derivational accounts of the ditransitive alternation has been proposed for a number of languages in recent years, relying on a wide range of empirical and theoretical arguments (Antonyuk 2015, 2020, Bailyn 1995, 2012, Cépeda & Cyrino 2020, Cornilescu 2020, Hallman 2015, 2018, Ormazabal & Romero 2010, 2019, among others). Relatedly, a growing number of researchers have stressed the crucial role of Information Structural factors in the choice between the two alternating frames, for various types of alternations. For instance, Information Structure has been argued to influence the distribution of Dative Experiencers (DEs) in meaningful and predictable ways, with the syntactic position of Dative Experiencers in Spanish and Polish arguably determined both by argument structure and information structure, with DEs occurring sentence-initially only in contexts that are determined by information structural properties of the sentence (see Jiménez-Fernández & Rozwadowska 2017, Fábregas et al. 2017, Jiménez-Fernández 2020, Alexiadou & Anagnostopoulou 2019). Some researchers have gone so far as to insist that information structure *is* part of argument structure, for instance, Onea & Mardale (2020) argue that topics may sometimes be part of argument structure. Specifically, Onea & Mardale provide evidence in support of the hypothesis that in some languages differential object marking (DOM) may have evolved from the syntactic marking of topicality.

While there exist distinct schools of thought on the proper treatment of various types of argument structure alternations, we note that the proponents of various accounts often tend to lead a dialogue with only those who share in their convictions about the underlying architecture of grammar. One of the main goals of this workshop is to promote dialogue between the proponents of derivational and non-derivational accounts of various convictions by examining novel as well as classic arguments in the context of our present day understanding of these phenomena. This workshop is thus aimed at bringing together researchers working on argument structure and argument structure alternations, with a special focus on novel empirical and theoretical arguments for or against derivational and independent projection views. The role of information structure in various argument structure alternations is the topic of some of the selected abstracts.

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## **Causative verbs and Intransitive Causatives**

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Keywords: Causativity, Argument Structure, Alternation, Stativity, Dispositionality

We focus on an underexplored argument structure realization in causatives; and, specifically, on the productivity asymmetry between English (1) and Romance (2).

Intransitive Causatives (ICs) feature an (inanimate) subject which is interpreted as possible cause of change of state (COS). In ICs, the undergoer remains semantically and syntactically unrealized.

- (1) a. Smoking kills.  
b. Alcohol dehydrates.  
c. Rice constipates.
- (2) a. Fumar mata.  
b. El alcohol deshidrata.  
c. El arroz estriñe.

ICs challenge major generalizations concerning argument structure alternation: notably, that the internal argument is an invariable constituent in the causative alternation (Hale & Keyser 2002, *i.a.*); or that unique arguments in COS verbs are, by default, undergoers (Levin & Rappaport Hovav 2005).

**Properties.** ICs fail patterns expected for null-object constructions, like null-object oriented depictives, secondary/adjectival predicates (readily allowed by null/arbitrary implicit arguments, Rizzi 1996), or null-object quantification (cf. *Smoking kills \*depressed/\*some* vs., *John cooks/eats healthy some*). Although featuring COS verbs, ICs behave statively: like Individual-Level-Predications, ICs cannot appear in perception reports (*#I saw smoking kill*), be located in space (*#Shaving creams irritate in the bathroom*), license habitual readings (*#Smoking regularly kills*), etc. The definition of *Dispositional Causation* (Copley 2018) explains major semantic restrictions (Subject=probable cause).

**Proposal.** ICs are monadic (atransitive) realizations of the verb, where the external-argument-introducing head responsible for the causative component is merely complemented, not by a theme, but by mere rhematic information (RhemeP, Ramchand 2008),  $\sqrt{\quad}$  specifying the COS potentially triggered by the subject (vP [DP<sub>CAUSE/TRIGGER</sub> [V<sub>INIT</sub><sup>o</sup>, RHEME  $\sqrt{\quad}$ ]]). The lack of the internal-argument-licensing head (V)—argued to be the responsible for event denotation (LRH 1995, Ramchand 2007)—correlated with stativity suggests that, no theme, no COS-event-encoding component in the semantic/syntactic makeup of the VP. An external-argument-selecting v<sup>o</sup> interpreted as probable cause explains nonagentivity/intentionality (Folli & Harley 2007).

ICs reveal:

- A crosslanguage asymmetry linking (non)productivity with certain verb classes, which we contend follows from aspectual properties of the verb class;
- A major contrast in argument interpretation and structure used for equivalent meaning.

- (3) *Barcelona enloquece.* (Spanish)  
\*Barcelona maddens. (cf. lit.=Barcelona goes mad) (English)  
'Barcelona causes madness'

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## The interaction between the implicit subject and the person restriction

## in Basque impersonals

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Keywords: impersonals, detransitivization, implicit arguments, Basque, person restriction

Basque is a morphologically ergative language where, in a transitive active clause, the subject is marked ergative, the object bears absolutive zero case and both are cross-referenced in the auxiliary, which is *edun* ‘have’ (1). The impersonal is a detransitivized configuration where the thematic direct object is the only overt argument, and the thematic subject, although semantically present, does not have any morphological reflex: only absolutive-agreement markers are present in the auxiliary (Brettschneider 1979, Ortiz de Urbina 2006, de Rijk 2008, Fernández and Berro 2021), which in this case is *izan* ‘be’ (2).

- (1) *Dendariek liburu horiek erraz saldu dituzte.*  
 seller-PL.ERG book those[ABS] easily sell-PFVhave.3PLABS.3PLERG  
 ‘Sellers have sold those books easily.’
- (2) *Liburu horiek erraz sal-tzen dira.*  
 book those[ABS] easily sell-IPFV be.3PLABS  
 ‘Those books are easily sold.’

An important property of the impersonal is that the absolutive argument must be 3<sup>rd</sup> person (2a), generally non-animate. In order to have animate themes, some south-western varieties can mark theme objects with dative case (2b), especially with certain verbs and when the aspectual interpretation is generic or non-episodic.

- (2) a. *\*/?Aspaldian ez zara ikus-i/ ikus-ten*  
 a\_long\_time\_ago NEG be.2ABS see-PFV / see-IPFV  
 Intended: ‘You have not been seen since a long time ago.’
- c. *Aspaldian ez zaizu ikus-ten (zu-ri)*  
 a\_long\_time\_ago NEG be.2DAT[3ABS] see-IPFV you-DAT  
 ‘You have not been seen since a long time ago.’

In this talk we will argue that, despite its intransitive shape, the impersonal involves a particular kind of Voice projection that we term *defective* and that the implicit subject is not only semantically, but also syntactically active. More specifically, we argue it is projected as a silent PERSON pronoun in the specifier of Voice. The semantic and syntactic presence of the implicit subject is supported by the fact that it can license agent-oriented adverbs and secondary predicates, it can control into purpose clauses and bind reflexive anaphors (Baker et al. 1989; Bhatt and Pancheva 2005; Collins 2005; Landau 2010). On the other hand, Voice being defective implies having no uninterpretable  $\phi$ -features and no Case to assign. As a consequence, the two arguments within VoiceP have to compete to Agree with the next functional head, namely T. The uninterpretable  $\phi$ -features in T are split (*uPers* and *uNum*) between the external and internal arguments and this causes the person constraint on the internal argument, which can only value Number features (see Taraldsen 1995; Anagnostopoulou 2003; Rezac 2009; and especially Ordóñez & Treviño 2011, 2016 and MacDonald 2017 for a similar split in Spanish *se*-impersonals). We will argue that if an extra Case-licensor is introduced in the derivation (Rezac 2011, Kalin 2018, Levin 2019), the person restriction is overcome and the theme is marked dative. In this way, the dative marking of the theme in impersonals is somehow similar to the DOM

phenomenon also attested in transitive clauses of Basque south-western dialects, as it is mainly regulated by the animacy of the theme. However, the dative-marking strategy is generally found in impersonals when the aspectual interpretation is generic or non-episodic, just like Spanish middle-impersonals (Mendikoetxea 1999). The extra Case-licensor in impersonals is thus mostly available when the aspect is imperfective, like argued for some DOM phenomena in other languages (Kalin 2018; Levin 2019).

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## On two classes of unaccusatives in Shantou Teochew (Southern Min)

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Keywords: argument structure, unaccusatives, Voice, Initiation, Sino-Tibetan

This paper contributes to the study of the division of labor between Voice and verb structure in argument structure interpretation (Harley 2013, Legate 2014, Alexiadou et al. 2015) through a case study on unaccusatives in Shantou Teochew ('Swatow'), an understudied variety of Teochew (Southern Min, Sino-Tibetan). All data was collected by the author.

Southern Min varieties are well known to build unaccusatives with a verb grammaticalized from *give* (Matthews et al. 2005; Lin 2011, Chen & Yap 2018), such as *kə* (1) in Shantou Teochew. Across Min varieties, (2) is also possible ((1) is typically most natural). Syntactically, previous work treats (2) as an alternant of (1). This paper argues that although both (1)-(2) are unaccusative, their argument structures are syntactically and semantically distinct, at least in Shantou Teochew: while (2) is anti-causative, I propose (1) involves (what I call) anti-initiation, an apparently previously unanalysed effect.

- |     |    |                      |             |            |          |     |    |                      |          |
|-----|----|----------------------|-------------|------------|----------|-----|----|----------------------|----------|
| (1) | Si | tengmun              | <b>kə</b>   | <b>yi</b>  | kui-ku.  | (2) | Si | tengmun              | kui-ku.  |
|     | CL | window               | <b>GIVE</b> | <b>3SG</b> | open-RES |     | CL | window               | open-RES |
|     |    | 'The window opened.' |             |            |          |     |    | 'The window opened.' |          |

Syntactically, while both (1)-(2) include one of a closed class of grammaticalized result verbs (RES), which indicate a target state holds of the surface subject, and that VP is telic, (1) is also built with the light verb *ke*, which embeds a 3SG expletive pronoun *yi* (syncretic with a 3SG referential pronoun *yi*). Comparison of (1) with a structurally identical passive(-like) structure (3) provides evidence *yi* is expletive. Anaphora tests show the external argument is referential in (3), but not in (1); and instrumental, purpose clause, and agentive adverb tests show *yi* is thematic in (3) but not (1). In syntax, the expletive can be modelled via (a variant of) expletive Voice (Schäfer 2008, Alexiadou et al. 2015, Wood 2015), adding to recent expanded Voice taxonomies (Legate 2014 i.a.).

- |     |                                   |        |    |         |       |
|-----|-----------------------------------|--------|----|---------|-------|
| (3) | Ua                                | tiam   | kə | laosu   | me.   |
|     | 1SG                               | always | KE | teacher | scold |
|     | 'I'm always scolded by teachers.' |        |    |         |       |

However, while neither (1) nor (2) has a thematic external argument, the status of non-specified Initiators in the pair can be distinguished semantically: while in (2) an Initiator is merely unspecified, I observe that (1) denies an Initiator; this is *anti-initiation*. If the speaker witnesses how (1) came about, (1) is false, though (2) can be true. (2) can thus be continued by specifying an Initiator (e.g. '*...and the wind opened the window*'), but (1) cannot.

Verb type compatibility provides further key evidence for distinguishing the grammar of (1)-(2). (1) builds unaccusatives of seemingly all verb classes (including *cut*, *murder*, *forget*, *love*), excluding unergatives. In contrast, (2) has verbal argument structure properties entirely familiar of (change-of-state) anti-causatives cross-linguistically.

Though the syntactic, athematic Voice analysis represents the absence of a thematic Initiator in (1), it does not explain the unspecified vs. denied Initiator contrast, nor its productivity across verb types. I show (1) asserts that an (underspecified) event *kə* produces the event described by the embedded lexical verb. I argue that it is the combination of the underspecified event with the

embedded expletive that produces an interpretation that no participant/nothing initiated the embedded event, across verb types.

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## Against a lexicalist account of the Argument-Per-Subevent Condition

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Keywords: argument structure, event structure, manner, result, roots

Rappaport Hovav & Levin (2010) (RHL) argue Manner/Result Complementarity has consequences for argument realization: manner verbs permit object deletion (e.g., *All last night John scrubbed*) and unselected objects (e.g., *John scrubbed his fingers raw*), whereas result verbs do not (cf. *\*All last night John broke* and *\*John broke his fingers bloody*). This follows from RHL’s (2001: 779) Argument-Per-Subevent Condition (ASC): there must be one argument in the syntax per subevent in the event structure. Namely, RHL argue manner verbs involve an ACT subevent, whereas result verbs involve a BECOME subevent. Thus, result verbs are predicted to always realize the argument of the BECOME subevent (i.e., the object in transitive predicates), as per the ASC.

**Here**, we provide data showing that the ASC holds as a descriptive generalization only insofar as it is severed from the semantic verbal classification by RHL. On the one hand, the lexicalization of the BECOME subevent in a change-of-state predicate appears to be granted independently of the verb even if a result verb is involved. In particular, data below involve result verbs in unselected (1) and deleted object (2) constructions.

- (1) a. Six times we broke her loose from the rocks only to have her catch again. (Google Books)  
b. With a few slices of her claws, she tore him free. (Google Books)  
c. They leafed the bare trees black, broke the branches off the winterdry limbs. (COCA)
- (2) a. Molten nuclear fuel can melt through the reactor’s safety barriers. (GloWbE)  
b. Thieves smashed through the window of the popular Blue Genes boutique. (COCA)  
c. The bullets ripped into the tissue of his back and shoulder. (GloWbE)

On the other hand, result verbs can also be found in configurations, like unergative predicates (3) and creation predicates (4), where only an ACT subevent, but not a BECOME subevent, is taken to be involved (RHL).

- (3) a. Smoking kills.  
 b. Alcohol dehydrates.  
 c. Normal dryers wrinkle. (Mangialavori Rasia & Ausensi 2020)
- (4) a. Scientists just melted a hole through 3,500 feet of ice. (Web)  
 b. I stuck my GoPro under some ice and then shattered a hole right above it. (Web)  
 c. A [...] team blew a hole in the wall near the embassy and charged through. (Web)

Adopting a neo-constructionist approach to argument and event structure (Mateu & Acedo Matellán 2012, i.a.), we argue this can only be explained by assuming that verbs do not come with a grammatically relevant specification for manner or result from the lexicon, but they acquire this specification on the basis of their association with the syntactic structure. We thus argue against RHL's claim that the lexicalization of manner/result determines the argument realization options of verb classes and in favor of severing the lexicalization of manner/result from the idiosyncratic properties of verb roots.

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## Alternating arguments of Polish psych verbs

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Keywords: psych verbs, the causative/inchoative alternation, unergative verbs, unaccusative verbs, the Polish language.

Cross-linguistically, Object Experiencer (OE) verbs alternate with Subject Experiencer (SE) predicates, which are often reflexively marked (Cançado et al. 2020 for Brazilian Portuguese, Hirsch 2018 for German, Sonnenhauser 2010 for Russian, a.o.). Alexiadou and Iordăchioaia (2014) (as well as Alexiadou and Anagnostopoulou 2019, 2020) treat the OE/SE alternation as a subtype of the causative/inchoative alternation (CIA), called the psych causative alternation.

The paper examines an alternation between OE verbs, (1a), and reflexively marked SE predicates, (1b), in Polish with a view to determining whether it is a subtype of the CIA.

- (1) a. Głos komentatora zirytował Marię.  
 voice.NOM commentator.GEN irritatedMary.ACC  
 ‘The commentator’s voice irritated Mary.’
- b. Maria zirytowała się (głosemkomentatora).  
 Mary.NOM irritatedREFL voice.INSTR commentator.GEN  
 ‘Mary got irritated with the commentator’s voice.’

We argue that in Polish this alternation does not represent the CIA, typical of change of state (COS) verbs (Schäfer 2009). Although reflexive SE verbs show the same reflexive marker as the one found in the CIA (viz. *się* in (1b)), they are not inchoative (contra Alexiadou and Iordăchioaia 2014, Alexiadou and Anagnostopoulou 2019, 2020). The reflexive SE alternants of stative and eventive OE verbs in Polish analysed here pattern alike and represent two types: (i) bivalent, with the Experiencer subject and the instrumental case marked complement (see (1b) with the bracketed instrumental phrase), and (ii) monovalent, with just the Experiencer (see (1b) without the bracketed instrumental phrase). We argue that neither of the two types of SE verbs resembles inchoatives, because inchoatives can never co-occur with instrumental D(N)Ps, and the monovalent structure is not unaccusative (contra Alexiadou and Iordăchioaia 2014), but rather unergative (Reinhart 2002). This claim gets support from the fact that reflexive SE verbs, like unergatives (but unlike unaccusatives, see Cetnarowska 2002), can occur in *-no/-to* impersonals, (2):

- (2) Zirytowano się.  
 irritated-no REFL  
 ‘One got irritated.’

Neither can reflexive SE alternants of OE verbs combine with cause *od*-PPs, (3), typical of inchoatives, (4):

- (3) Maria zirytowała się \*(od głosu komentatora).  
 Mary.NOM irritatedREFL from voice.GEN commentator.GEN  
 ‘Mary got irritated with the commentator’s voice.’

- (4) Drzwi otworzyły się od podmuchu wiatru.  
 door.NOM opened REFL from gust wind  
 ‘The door opened from the gust of wind.’

Since OE verbs in Polish do not undergo the CIA, they differ from change of state verbs internally or externally caused, which participate in this alternation (Rappaport Hovav 2020). Our analysis contradicts Alexiadou and Anagnostopoulou (2020), who view non-agentive OE verbs as transitive internally caused verbs with anticausative variants, but it supports Landau’s (2010) contention that non-agentive OE verbs trigger no change of state.

We follow Reinhart’s (2016) idea that the Experiencer merged internally with OE verbs is associated with accusative case, whereas once the accusative case feature is absorbed (by *się* of reflexive SE verbs), the Experiencer merges in the external argument position. This solves the linking problem associated with the Experiencer (Belletti and Rizzi 1988, Landau 2010).

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## **Resultative and stative passives in Catalan: an approach from event structure**

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Keywords: passives, stative, resultative, aspect, event structure

In this paper, we analyse Catalan resultative and stative passives (Embick 2004) and their alternation with *ser* and *estar* (Bartra 2002; Ramos 2002). Following Embick, we assume that resultative passives express states that are the result of a previous event. However, we modify the definition of Embick's stative passive and we propose that it is the passive created from stative verbs (understood as Kimian states, following Maienborn 2005): *conèixer* ('to know'), *respectar* ('to respect'), etc. We argue that Embick's stative passive is not passive, as it is not related to any eventuality.

We provide a new outlook on the formation of passive structures as lexicalisation patterns of the event structure presented in Ramchand (2008, 2018). Our claim is that a passive construction is the

result of the reduction of the event and argument structure of a predicate: some projections of the event structure (and their arguments) are not lexicalised.

Thus, a resultative passive is the lexicalisation of the event structure up to ProcP or ResP, so that the result can be the creation of a resultant state or a target state, respectively (Kratzer 2000) (in a similar vein to Anagnostopoulou 2003, 2017). EvtP (Ramchand 2018) and InitP are excluded. Besides, the creation of a resultative passive involves the projection of a P, which is related to the combination of these passives with *estar*: *estar* combines with predicates that are internally PPs and lexicalises the preposition (Zagona 2009; Gallego & Uriagereka 2009, 2016).

On the other hand, since stative passive is created from stative verbs, we claim it is the lexicalisation of the projection InitP (that, in absence of ProcP, is a stative head). EvtP is excluded. The absence of P explains the impossibility of combining stative passives with *estar*.

- (1) a. El got {està / ??és} trencat  
the glass {iS<sub>estar</sub> / ??iS<sub>ser</sub>} broken  
b. El professor {\*està / és} respectat  
the teacher {\*iS<sub>estar</sub> / iS<sub>ser</sub>} respected

We also analyse the case of resultative participles that alternate with adjectives: *buidat* (emptied) – *buit* (empty), *emmalaltit* (‘fallen ill’) – *malalt* (‘ill’). In these cases, the resultative participle (*buidat*, *emmalaltit*) expresses a resultant state. As for the adjective, contrary to what is normally assumed (Gibert-Sotelo 2017; Berro 2019), we claim that it can be resultative or stative. Resultative adjectives always express a result, specifically, a target state (*malalt*); they combine with *estar* and when they alternate with a participle, the participle expresses the resultant state (*emmalaltit*). Stative adjectives can express either a resultative state or a pure state (*buit*); they can combine with *ser* and *estar*, depending on the intended meaning (pure vs. resultative state, respectively).

- (2) a. L’ illa {està / \*és} buidada / emmalaltida  
the island {iS<sub>estar</sub> / \*iS<sub>ser</sub>} emptied / fallen ill (=ill)  
b. La Maria {està / \*és} malalta  
the Maria {iS<sub>estar</sub> / \*iS<sub>ser</sub>} ill  
c. La capsa {està / és} buida  
the box {iS<sub>estar</sub> / iS<sub>ser</sub>} empty

We will explore the structure of these predicates and the predictions we can make from them.

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#### Focus Fronting and Argument Structure

Mara Frascarelli

<not updated>

### Argument structure alternations and aspectual shift in extent verbs

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Keywords: argument structure, aspect, extent verbs, stative-eventive alternation, Spanish

So-called *extent* verbs (Gawron 2009, Bosque 2014) in Spanish, such as *rodear* ‘surround’, *cubrir* ‘cover’ or *border* ‘border’, show an interesting behaviour: they are eventive with agentive subjects (1a), while they are stative with non-agentive subjects (1b) (Rothmayr 2009).

- |     |    |            |                 |               |           |                              |
|-----|----|------------|-----------------|---------------|-----------|------------------------------|
| (1) | a. | <i>Los</i> | <i>soldados</i> | <i>rodean</i> | <i>el</i> | <i>pueblo (lentamente).</i>  |
|     |    | the        | soldiers        | surround      | the       | village (slowly)             |
|     | b. | <i>Los</i> | <i>árboles</i>  | <i>rodean</i> | <i>el</i> | <i>pueblo (*lentamente).</i> |
|     |    | the        | trees           | surround      | the       | village (*slowly)            |

Only the agentive eventive version of extent verbs can be part of verbal (i.e., eventive) passives with *ser* ‘be’ (2a); the non-agentive stative version cannot (2b) (García-Pardo 2018). Interestingly, both the eventive and the stative alternants are allowed in adjectival passives with *estar* ‘be.SL’ (2c).

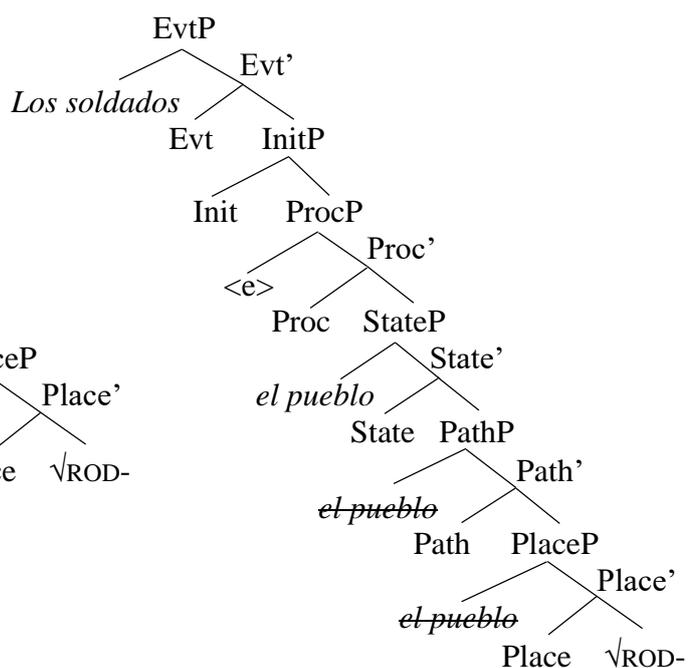
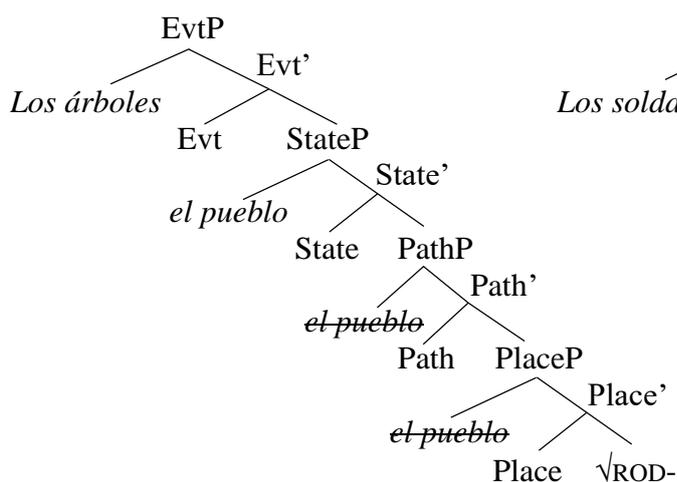
- (2) a. *El pueblo es/fue rodeado por soldados.*  
 the village is/was surrounded by soldiers
- b. *\*El pueblo es/fue rodeado por árboles.*  
 the village is/was surrounded by trees
- c. *El pueblo está rodeado por soldados / por árboles.*  
 the village is.SL surrounded by soldiers/ by trees

These verbs have been analysed by García-Pardo (2017) in the following terms: in eventive uses they involve a Path configuration, while in stative ones they lack Path and only include a Place layer. *Contra* García-Pardo (2017), and in line with Gawron (2005), we argue instead that the stative version also involves Path. Evidence for the presence of a Path component is provided by the idea of transition or change that they enclose, which explains, among other properties, why their participles are compatible with *estar* (the Spanish stage-level (SL) copula) in the adjectival passive (cf. (2c)). Besides, we contend, with García-Pardo (2018) and *contra* Rothmayr (2009), that stative extent verbs are not causative. Hence, the observed alternation can be seen as a subtype of the causative-anticausative alternation, even though the non-causative (stative) alternant does not suppress the external argument.

Following a neoconstructionist approach to the syntax-lexicon interface as the one proposed in Ramchand (2008, 2018), we hypothesize that extent verbs may enter two different structural configurations. When combined with a non-agentive external argument, (1b), these verbs are inserted into a configuration that lacks both the subeventive projection that licenses eventivity (i.e., Proc, which introduces the event variable <e>; cf. Berro 2015) and the subeventive projection that conveys causativity (i.e., Init), expressing a state (State) that extends along a delimited Path (Path + Place), the holder of such a state being the non-agentive external argument licensed at the specifier of EvtP, as represented in (3). By contrast, when combined with an agentive external argument, (1a), they enter a structure expressing both causation (Init) and dynamic eventivity (Proc), the external argument at EvtP being configurationally interpreted as the Initiator of a telic change of state/place, as represented in (4).

(3) *Los árboles rodean el pueblo.*

(4) *Los soldados rodean el pueblo.*



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## Argument hierarchies and alternations in causative and double object constructions

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Keywords: Double object constructions, causativization, Arabic, syntax, argument structure

In this talk, I claim that syntactic parallels between causative constructions and transfer-of-possession constructions in Arabic point to the conclusion that the double object frame is the derivational source for the prepositional frame in both constructions. Contemporary Syrian Arabic (and other dialects) has a ditransitive alternation in transfer-of-possession constructions essentially identical to English, in which the ‘double object’ frame (1a) alternates with a ‘prepositional’ frame in (1b) expressing the same meaning. In each frame, the first object is ‘primary’ in various respects parallel to English that I describe in greater detail in the talk.

- (1)     a.     ṣaṭē-na     l-binit     d-dzakīt.  
           gave-1PL   the-girl   the-jacket  
           ‘We gave the girl the jacket.’  
        b.     ṣaṭē-na     d-dzakīt     li-l-binit.

gave-1PL the-jacket to-the-girl  
'We gave the jacket to the girl.'

A class of verbs in Syrian Arabic (and other dialects) show an alternation between a transitive or intransitive base form and a causative form with an additional external argument but that preserves the argument structure of the base verb within the VP. For a base verb of the prosodic form *CVC(V)C* (2a), the causative is marked by the template *CaCCaC*, preserving the consonants of the base (2b).

- (2) a. l-binit libis-it d-dzakīt.  
the-girl put.on-3FS the-jacket  
'the girl put on the jacket.'
- b. labbas-na l-binit d-dzakīt.  
CAUS.put.on-1PL the-girl the-jacket  
'We dressed the girl in the jacket.' (lit. 'We dressed the girl the jacket')

Causative verbs derived from transitive verbs on this pattern systematically show the same complement frame alternation as transfer-of-possession verbs like *ʕaṭa* 'give' in (1) do. The primary object in (2b) may appear in a prepositional phrase headed by *li-* 'to', in which case the theme becomes primary object (3).

- (3) labbas-na d-dzakīt li-l-binit.  
CAUS.put.on-1PL the-jacket to-the-girl  
'We dressed the girl in the jacket.' (lit. 'We dressed the jacket to the girl')

Both an analysis that derives (1a) from (1b) along the lines of Larson (1988, 2014) or that base generates the two frames separately along the lines of Harley (2002), generates the prepositional frame in (1b) as a base structure. But a parallel analysis of (2b)/(3) would then have to attribute base structure status to (3), where the arguments of the base verb *libis* 'put on' underlying causative *labbas* 'dress (s.o.)' are reversed vis a vis basic *libis* in (2a). This requires us to postulate an alternative root meaning 'put on' with the inverse argument structure of *libis* 'put on' in (2a), which is, however, never attested in its bare active form. I propose instead that the prepositional frame in (3) is derived from the double object frame in (2b) and in parallel, (1b) from (1a). I also sketch some ramifications for the *faire*+infinitive (Kayne 1975) and transfer-of-possession (Kayne 1984) constructions in French/Romance, which can be treated analogously to Arabic but with a restriction to one internal bare DP argument.

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## Polysemy and monosemy in the object-drop alternation

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Keywords: argument drop, existential closure, manner modification, incorporation, antipassive

The gulf between derivational and non-derivational approaches to the dative alternation is not so wide as it may appear. In both derivational (monosemous) and ‘alternative projection’ (polysemous) accounts, the same number of arguments are introduced in the syntax, and those arguments are interpreted in relation to the same root making the same ‘encyclopedic’ semantic contribution. (Since ‘non-derivational’ approaches include Bruening-style proposals in which one variant is an applicative, the term ‘non-derivational’ is misleading, as applicatives are a canonical example of ‘derivation(al morphology)’.) The core question really is how low in the syntactic structure the alternation-triggering pieces are introduced, and whether the relationship between the root and the internal arguments is identical at first Merge across the variants. In monosemous/derivational approaches, the alternation-triggering syntactic pieces are higher in the structure and the part of the structure created by first Merge looks the same across variants; in polysemous/non-derivational analyses, the first Merge domain is distinct in each variant.

A potentially revealing empirical ground to investigate the role of derivation in argument-structure alternations is that of the object drop construction. In English, object drop, as with nearly every other argument structure alternation, is morphologically unmarked, and for the most part analyses focus on the idea that the internal argument has either been semantically bound or syntactically saturated by a null element. Less considered is the possibility that the root has undergone first Merge in a different location than in the transitive alternant. In “Mary read/Mary read a book”, for example, one could imagine a ‘polysemous’ alternation with the root merged in the intransitive in the typical locus of an unergative intransitive construction (say complement to *v*, followed by incorporation), and in the transitive in the typical locus of a transitive creation/consumption construction (say, as a manner modifier of *vP* followed by *m*-merger).

If we turn to a language where argument structure alternations are typically morphologically marked, such as Hiaki (Uto-Aztecan), we find potential evidence that both styles of analysis are needed. Transitivity is a highly salient category in the language, and changes in transitivity are nearly always morphologically marked on the verb, but certain verbs, such as *bwiika* ‘sing’, allow an object to (dis)appear without any overt marking:

1. Uu maaso      *bwiika*            (*Sea Yoleme Huya Sika*).  
The deer.singer sing.pres      (*Flower Person Wilderness Go.pfv*)  
“The deer singer is singing (Flower Person Went to the Wilderness).”

Other verbs, such as *bwa’e*, ‘eat’, require a surface object, and take a different form when used without an object:

2. a.      *Merehilda*      *tahkaimbwa’e*.  
         *Merehilda*      *tortillas eat.tr.pres*  
         “Merehilda is eating tortillas.”
- b.      *Merehilda*      ***hi’ibwa***.  
         *Merehilda*      *eat.intr*  
         “Merehilda is eating.”

The *hi('i)-* prefix is related to the indefinite *hita* ‘something’. Intransitive verbs derived by *hi('i)-* prefixation are listed independently in the dictionary, while labile object-drop verbs go lexicographically unremarked. We argue that difference between the two classes of object drop alternation within Hiaki is not one of polysemy vs monosemy, but rather depends on where in the structure the roots are licensed to appear.

## Restructuring antipassives: The argument structure of complex events

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Keywords: Antipassive constructions, event structure, restructuring, Tunisian Arabic, non-canonical case.

According to Postal (1977), while passivization results in agent-less constructions whereby the subject is expressed in the form of an adjunct *by phrase*, antipassivization results in theme-less constructions whereby a direct object is demoted to a non-argumental position. The present paper rejects such an approach and the assumption that all constructions described as antipassives indistinctively result in a modification of the argument structure of the involved verbs, although it ultimately sides with Postal (o.c.) in the assumption that antipassivization is not restricted to Ergative/Absolutive languages.

The Inuktitut example in (1) illustrates what prototypical instances of antipassive construction look like, meaning that they involve: loss of object-agreement on the verb, the occurrence of non-canonical case marking on the subject and on the object and display dedicated antipassive morphology:

- 1)     anguti Ø           niri-si-vuq           niqi-**mik**  
       man (ABS)     eat-incpt-part.3sg     meat-**case**  
       ‘The man starts to eat meat’  
       (Spreng 2016: (19b))

Polinsky (2017) observes that none of the above morphosyntactic criteria can be assumed in isolation as the defining property of these constructions, without incurring in the exclusion of a large portion of the languages that have been traditionally considered to be antipassivizing. The present paper builds on this observation and proposes a novel, Generative approach to the phenomenon which accounts for antipassivization in terms of “restructuring” (Rizzi 1976; 1978; Wurmbrand 2012).

Wumbrand (o.c.) suggests that the morphosyntactic manifestations of restructuring are language-specific (e.g. clitic climbing in Romance); adopting this view I propose that some of the morphosyntactic properties displayed by antipassivizing languages result from an underlying restructuring context. This is to say that antipassives underlie a complex vP domain, as in Fábregas et Jiménez-Fernández (2016) approach to event building, whereby two verbal heads are dominated by the same temporal node.

Arguments of three types support the analysis: first, the observation independently made by different authors that antipassives involve, or involved at a previous diachronic stage, multiple verb forms in one clausal domain (Schmidt 2004; Bok-Bennema 2011). Second, the fact that the antipassive constructions considered express outer aspectual distinctions (e.g. repetitive, inceptive interpretations),

and aspectual distinctions of this type are encoded by means of what are considered to be “core” restructuring verbs in other languages. Last, the availability of crosslinguistic evidence which shows that traditional restructuring contexts can trigger object case alternation in Nominative/Accusative systems too (Pallottino 2020). See for instance the following Tunisian Arabic example:

- 2)     **nabda**           nākil           \*(**fi**)-l-maqrōna  
       I.start.imp    I.eat.imp       **fi**-the-pasta  
       ‘I start to eat the pasta’  
       (Ritt-Benmimoun 2017: 25)

The comparison between (1) and (2) shows that a typical property of antipassives, i.e. non-canonical Case on the direct object, can be found under similar structural conditions in Tunisian Arabic too (i.e. in the presence of the restructuring verb ‘to start’). This supports the idea that the array of effects found in antipassive constructions (cf. (1)) can possibly result from the interaction of multiple “common” factors, like the Ergative/Absolutive Case alignment and restructuring; rather than amounting together to the definition of a “unique” construction type only found with a restricted set of languages.

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## **When a possessor runs away from home, where does it go? A study on external possession and types of verbal argument structure**

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Keywords: Possessor raising, topicalization, inchoative predicate, unaccusative predicate, affectedness constraint



We propose that the periphery of an unaccusative vP-shell contain an extra projection in which the semantic relation of affectedness is established. This projection is not present in inchoative predicates. Thus, if causative vPs are phases independently of their transitivity (Legate 2003), and if control reduces to movement (Hornstein 2001), then, the possessor moves first to the affectedness thematic position in unaccusative structures. Due to this intermediate derivational step, the possessors escape the vP-phrase and moves to Spec/TP.

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## Ditransitive Alternation as Raising to Object

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Keywords: dative alternations, DOCs, *deny*-verbs, Person-Case Constraint, animacy.

Recent proposals on ditransitive structures argue that alternate constructions do not encode specific meanings (Rappaport-Hovav & Levin 2008, etc.) and reanalyze classical arguments against derivational analyses (scope freezing, *again*-adverbs, nominalizations, idioms, etc.), showing that either they are hypothesis-neutral or they pose serious problems for polysemic analyses. Particularly informative is the observation that “non-alternating” DOC-verbs like *deny* (1) do appear (often obligatorily) in *to*-constructions, crucially in contexts like (2), where the DOC derivation becomes deviant for independent reasons:

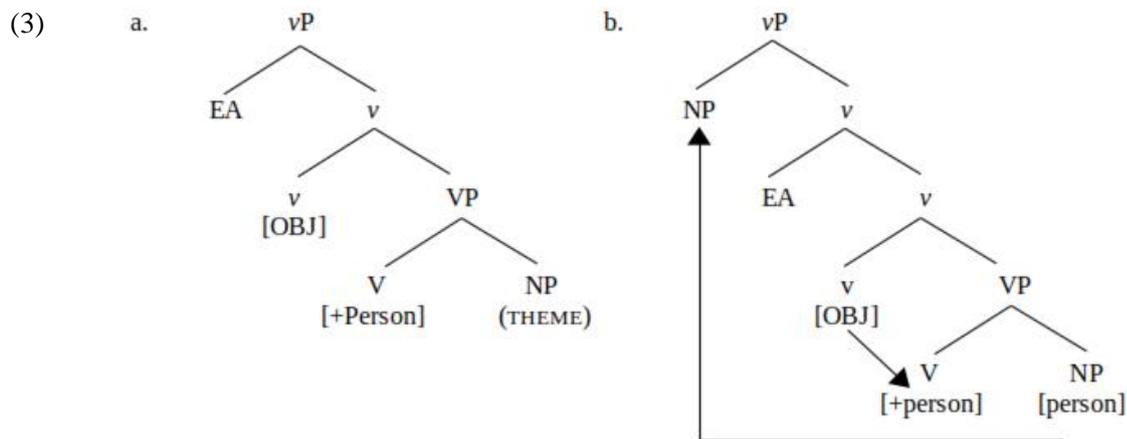
- (1) a. Old deVienne denied him his support

- b. \* Old deVienne denied his support to him  
 (2) a. \*Old deVienne denied him his daughter  
 b. Old deVienne denied his daughter to him

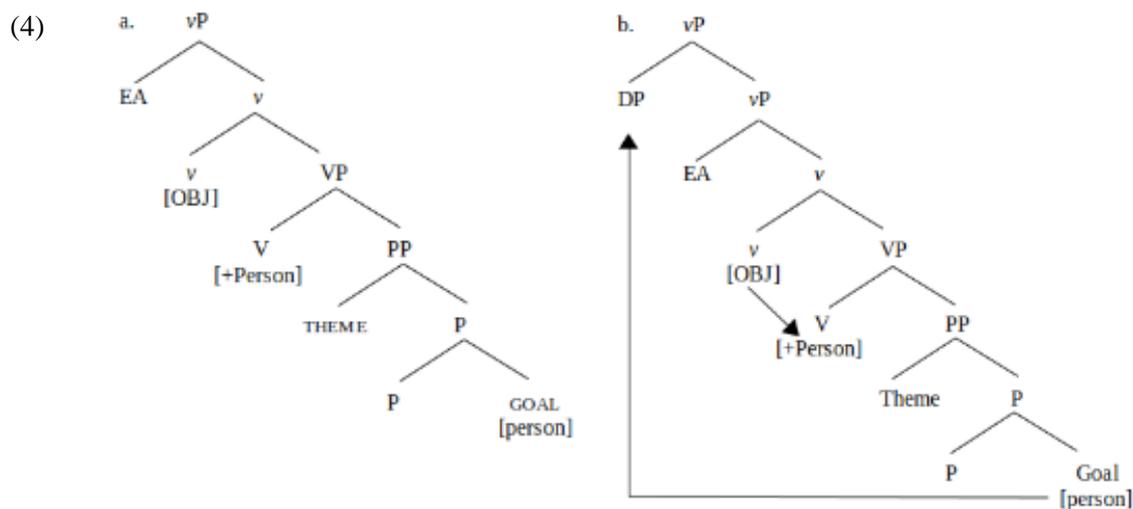
When the theme is animate, *to*-constructions with *deny* not only are allowed (2b), but they are strongly preferred over DOCs (2a), exactly the opposite of what happens in the regular case, where the theme is inanimate (1).

In a derivational analysis, both the obligatoriness of “regular” *deny*-DOCs (1a) and the emergence of *to*-constructions(2b) may derive from the lexical properties of *deny*-verbs if these verbs come specified with a person feature that must be syntactically valued via agreement with some object NP. From that perspective, *deny*’s lexical specification just pushes into the extreme the derivational properties of regular ditransitives.

Our analysis departs from standard ones in that the object agreement relation (OBJ) is not a requirement of every object (Béjar & Rezac 2009, Danon 2006, Ormazabal & Romero 2007, 2019, etc.). In English, OBJ is activated only when the verb encodes person features (Richards 2015). This [ $\pm$  animate] distinction captures the configurational asymmetries overtly expressed in the morphology of some languages as Differential Object Marking (Torrego 1998, López 2012, Ormazabal & Romero 2019).



In a regular caused possession configuration, the recipient argument is usually animate (Green 1974, Oehrle 1976, etc.); it thus crosses over the theme, which is “inert” for person agreement, yielding a DOC. We contend that this movement is an instance of a more general Raising-to-Object movement (Bošković 2010).

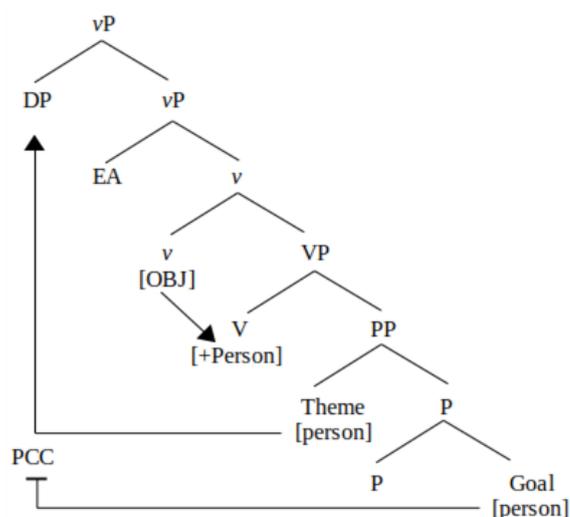


The alternative *to*-construction is a configuration where OBJ has not been activated.

The particularity of *deny* verbs is that activation of the OBJ relation is obligatory due to lexical specifications of the verb, forcing (2b): had not OBJ with the animate recipient occurred, the (lexically determined) person feature of *deny* would have not been valued, yielding the ungrammatical (2a).

However, when the theme encodes [person], it is the closest argument to check the OBJ relation and receives DOM (if available); raising-to-object of the recipient--hence, DOC--is thus blocked and the *to*-construction (2b) is the only possible derivation. This is a particular case of what is usually referred to in the literature as the Person Case Constraint.

(5)



While non-derivational analyses require both language-specific constructions and construction-specific constraints, unjustified both semantically and morpho-syntactically, our analysis integrates these facts into general crosslinguistic derivational conditions, reducing their complex distribution to issues familiar to other incorporation, PCC and DOM contexts in many languages of the world.

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## **The syntactic alternating architecture of English and Spanish double object and prepositional dative constructions from an acquisition approach**

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Keywords: dative alternation, double object, prepositional dative, first language acquisition, emergence

The syntactic status of English (1) and Spanish (2) dative alternation (DA) is still a matter of debate. In English, the debate focuses on the derivation between the two DA types: whether *to/for*-datives (1a) are the source from which double object constructions (DOCs) (1b) are derived (Larson 1990, and Hale and Keyser 2002), or whether DOCs are the original structure (Aoun and Li 1989, and Haspelmath 2006). Snyder and Stromswold (1997) establish a common underlying configuration for DA as complex predicates, although they also argue how *to*-datives is subject to an additional syntactic requirement DOCs are not. In Spanish, Larson's (1990) view has been adopted and so *a/para*-datives (2a) are analyzed as the source of the Dative-Clitic-Doubled ones (DCLDs) (2b) in which an *a*-DP is doubled by a clitic; hence, DCLDs correspond to English DOCs although they differ in the surface form (Beavers and Nishida 2009, Cuervo 2007, and Demonte 1995).

- (1) a. John sends a letter to Mary [to-dative]  
b. John sends Mary a letter [DOC]  
[Larson 1988, 343-353]
- (2) a. Entregué las llaves al conserje [a-dative]  
give.1sg.past the keys to+the janitor  
'I gave the keys to the janitor'
- b. Le entregué las llaves al conserje [DCLD]  
cl.dat. give.1sg.past the keys to+the janitor  
'I gave the keys to the janitor'  
[Demonte 1995, 6]

From the standpoint of first language acquisition, derived structures emerge later in spontaneous production if compared to underived ones and have a lower incidence in the initial acquisition stages (Snyder and Stromswold 1997). However, if DA constructions share a common dependence on a single property (Snyder 2001 for English), their acquisition should be fairly concurrent. Studies on the DA acquisition by monolingual children are rather scarce (Snyder and Stromswold 1997 for English,

Torrens and Wexler 2000 for Spanish) and they point to non-significant differences in the emergence of the two DA types.

We analyze how English and Spanish DA structures emerge and are produced in the spontaneous longitudinal speech of monolingual children. Our aim is to shed light on the status of DA in these two languages by focusing on the age of onset and on their incidence throughout development. We also examine whether the frequency of exposure to English and Spanish DA in the adult input plays a role in the monolingual children's output.

Data come from 14 longitudinal corpora in CHILDES (MacWhinney 2000), on the production of 13 English monolingual children (age: 0;06-8;00) and 9 Spanish monolingual children (age: 0;11-4;08). The data analysis shows that double object and prepositional DA emerge at a similar age ( $t(9)=-2.079$ ,  $p=.067$  in English;  $t(7)=-.179$ ,  $p=.863$  in Spanish).

The concurrent onset of DA as seen in monolingual acquisition data lends support to Snyder and Stromswold's proposal that DA constructions are not derivationally related, and that this is possibly so for the two languages. Developmentally, double object constructions show a higher incidence than prepositional DA ( $t(12)=-4.453$ ,  $p=.001$  in English;  $z=-2.023$ ,  $p=.043$  in Spanish). This difference is explained in terms of prepositional DA's additional syntactic requirements and adult input factors.

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## The lexicon-syntax and information structure interfaces

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Keywords: atoms (lexical), creation, information structure, location, possession

We account for the range of interpretations of the dative and benefactive alternations with a lexical analysis that interacts with information structure.

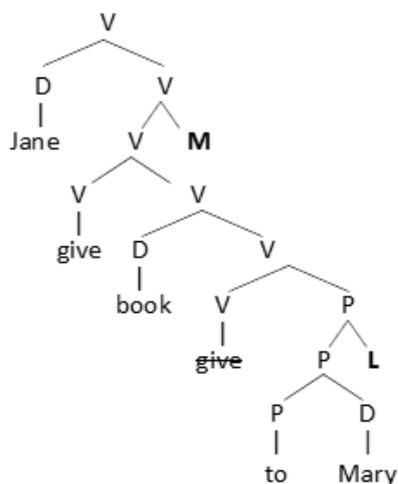
Our analysis is monosemous but non-derivational, within a theory in which verbal lexical roots are decomposed into atoms (Erteschik-Shir & Rapoport 2004, 2010). These semantic morphemes freely project structure: either as complements to a head, thus yielding, together with the projection of the morphological verbal head, the array of Hale-Keyser (1993, 2002) structure types; or as adjuncts, interpreted via modification. In Atom Theory (AT), there is thus no need for theta-role specification or lexical operations.

AT derives the dative alternation from the alternative projections of one lexical entry. A lexical entry consists of one or two atoms, which are specified as a particular **Manner** (Means, Manner, Instrument) or **Result** (State, Location). The results of the free projection of these atoms are limited by a principle of Full Interpretation.

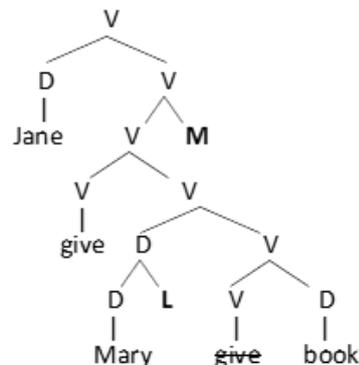
### Projection and interpretation

A dative verb is defined by particular **M,L** atoms. This single lexical entry can project structure (1) or (2).

(1) *Dative*

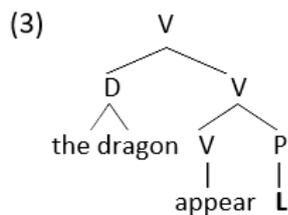


(2) *DOC (double-object)*



- The adjoined **M** atom modifies the upper predicate adverbially (yielding ‘cause’)
- The **L** atom in (1) modifies the PP → goal
- **L** in (2) is identified with the lower subject → derives possession (Rapoport 2015, and Manzini & Franco 2016.)

The creation verbs forming the base of the benefactive are also **M,L**. We analyze creation verbs as causative versions of *appear*:



*Appear*'s **L** is specified as a spatio-temporal location → 'The dragon appeared in the here-and-now.'  
*Jane built Mary a house*: Linking of the lower subject with **L** defines a domain for the created element  
 → benefactive interpretation.

The atoms thus yield the alternations and interpretations (Green 1974, Oehrle 1976, Larson 1988, Pesetsky 1995, Harley 2002, and Beavers & Koontz-Garboden 2020, a.o.) without requiring different templates, prepositions or derivations of one alternant from the other.

### Atom interpretation feeds Information Structure (IS)

The IS of the lower VP is free in the dative but fixed in the DOC (Erteschik-Shir 1979, Basilico 1998, and Jiménez 2009):

(4) Jane gave [ Mary-**Top** the book-**Foc**]

In the analysis here, the **L**-identified DP is necessarily interpreted as a topic.

This IS yields the extraction, scope, and pronoun facts of the alternants. (Larson 1990, and Brandt 1999.)

Our approach demonstrates the impact of lexical analysis on IS and thus has implications for the architecture of grammar.

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## WORKSHOP 19

### Towards a holistic understanding of language contact in the past

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**Keywords:** language contact, language change, linguistic theory, anthropology of language contact, sociology of language contact, cue-based change

#### Workshop description and research questions

The classical 20th-century theoretical approaches to language tend to view grammar through a basically monolingual perspective. This general tendency is perhaps due to the Saussurean view on languages as abstract systems, but also to the dominant monolingualism ideologies of late-modern nation-states (in the context of historical linguistics, see Laakso 2014). The tendency to view grammar in isolation from multilingual settings is so pervasive that even modern approaches do not often overcome the monolingual paradigm. Undoubtedly, the biggest culprit in perpetuating such a view has been the generative quest of internal grammar and the misconceptions of what this is and how to capture it.

At the same time, the effects of language contact very clearly manifest themselves, as discussed in the literature on language contact (see Matras 2009), contact-induced and “shared” grammaticalization (see Heine & Kuteva 2005, Robbeets & Cuyckens 2013), sometimes resulting in areal patterns particularly relevant for linguistic typology (see e.g. Koptevskaja-Tamm 2006).

Given that grammatical transfer is very real—in fact, rather pervasive—many authors and workshops have tried to address the impasse in dealing with language contact. As practitioners working in the field of historical and contact linguistics, we feel that there continues to be an important gap between the fact of commonly happening grammatical transfer in language contact and our theorizing about such grammars. We believe that this gap needs to be narrowed and eventually closed for the sake of both theories of grammar and theories of language contact. In fact, we would like to take this further and ask the question: Do we really need a separate theory of language contact? The rather attractive alternative would be to reduce the effects of language contact to theories of language acquisition, sociolinguistics, external factors as well as more generalised cognitive mechanisms such as copy and analogy which once properly interwoven they can offer holistic explanations (see Sitaridou 2014, 2018, 2019).

The aim of this workshop is to contribute to this and other related questions. Below, we outline several themes that we find important for making such progress.

- a. Studies of language contact such as Matras (2009) attempt to establish hierarchies of language-contact influence by tying them to hierarchies of borrowable features, either grammatical or pragmatic. Despite some prima-facie typological plausibility of borrowability hierarchies can such hierarchies empirically capture what seems to be a vast array of possible contact phenomena? In fact, are contact phenomena finite in their typology/manifestation or infinite given the possible number of combinations between languages (as social objects) and features? Parallely, in the generative tradition a similar attempt has been made by means of establishing interpretable and uninterpretable features in attrition and/or second language acquisition (see, for instance, Tsimpli 2003) and how these can be rendered vulnerable and lost in terms of language change (see Lavidas

2015, Lavidas and Tsimpli 2019, Sitaridou 2014, Neocleous and Sitaridou, to appear; Walkden and Breitbarth 2019). Does such feature-based approach allow us to make successful cross-linguistic generalizations? Moreover, how can historical linguists rely on such feature theories given the lack of consensus as to what is interpretable or not and how it may defer in different types of acquisition (Foreign Language Acquisition vs Second Language Acquisition vs attrition, etc.) (cf. different predictions made by Interface Theory (Sorace 2005, Belletti et al. 2005) vs Interpretability (Tsimpli 2003, Tsimpli & Mastropavlou 2007) vs Representational (Tsimpli et al. 2004; Tsimpli 2007; Tsimpli 2011))? Also, how such acquisition theories are compared to constrained theories of syntactic transfer under contact employing a parametric approach (Michelioudakis and Sitaridou 2020)?

- b. In the generative tradition, the locus of language change is taken to be language acquisition in childhood even if the locus of contact is the adult generation. However, how adequately can acquisition mechanisms be solely used to reconstruct prior stages of the language? Reanalysis, for instance, during first language acquisition is a super-powerful concept, but can it explain complex contact-related changes alone? In other words, doesn't it all depend on the input? If so, how can we reconstruct the input in a plausible way?
- c. A way to remedy the impasse for adequate theories of contact has been through the use of large data to gain higher resolution onto language change and contact (see Kroch (1989, 2001) in the formalist tradition, Todd et al. (2019) in the usage-based tradition, a.m.o.). Can such corpus-based, statistically sophisticated approaches contribute to our understanding of contact-induced change and how? Can large data show us how contact took place or merely show us that it actually took place?
- d. Classical comparative reconstruction has tended to posit static, variation-less systems in the proto-languages. However, more recently, the need to recognize proto-languages as subject to sociolinguistic variation and change has been fruitfully emphasized (e.g., Joseph 2006, 2012). Similarly, can we consider koines to be variation-less languages? If by proto-language we seek to establish a common denominator ancestor system does this equate with actually explaining language change, all the more of the contact type? What is the purpose of trying to establish proto-languages if variation has been constant all the way through?
- e. Recent anthropological research emphasizes the crucial contribution of linguistic ideologies (Kroskrity 2004, Lüpke & Storch 2013) in the functioning of multilingual communities. While the lexicon seems to be the easiest to control due to the transparent connection with ideological imperatives, one famous example of an ideologically driven syntactic constraint is the literary English prohibition of so-called split infinitives (e.g. "to first read the book"), motivated by the Latin model of synthetic infinitive. How can we theorize about the role that linguistic and political ideologies (for the role of prescriptivism, see, for instance, van Gelderen 2004, 2006) play in grammatical transfer or, as a matter of fact, sometimes, in delaying or even stopping the spread of a given change?
- f. There has recently been a growing sophistication in the studies of extralinguistic determinants or correlates of contact patterns such as subsistence patterns (e.g. Epps 2017). The findings of such research should surely be incorporated into our understanding of grammar as an adaptive system, in general, and grammatical transfer, in particular—but how exactly?

- g. How can we theorize the path between individual multilingual practices and their mental representation (e.g., “multiple grammars”) and community-level/environmental contact-induced change? How can we use the latter to shape the linguistic reconstruction process? How can cue-based reconstruction (Sitaridou 2014, 2016, 2019) successfully take place unless we reconstruct the input on the basis of socio-cultural and politico-historical data to create realistic scenarios for language acquisition and contact for communities under study?

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## **A unified approach to the study of language contact: How cross-language priming drives change in noun-adjective order**

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Keywords: language contact; priming; word order; Romani; Romanian

The connection between language contact and the bilingual speaker goes back to foundational authors in the field of contact linguistics such as Weinreich (1953) and Haugen (1953), and is widely accepted in contemporary contact linguistics (Kootstra & Muysken, 2017; Zenner et al., 2019; Adamou & Matras, 2020). Yet there is very little work that combines these two levels in a single study. In our paper, we propose a unified approach to language contact by testing the role of cross-language priming on contact-induced change at the level of complex NPs. This follows from studies that single out cross-language priming as a key mechanism in language contact (Loebell & Bock, 2003; Torres Cacoullos & Travis, 2018; Kootstra & Şahin, 2018). The novelty of our approach lies in the combination of methodologies from the field of language contact and the field of bilingualism, using data from a dialectological database (Study 1), a corpus of free speech (Study 2) and a psycholinguistic experiment (Study 3).

In Study 1, we analyse the Romani Morpho-Syntax database to identify word order preferences in Romani dialects from different countries. In particular, we examine the word order in 3,000 NPs from 119 Romani speakers. In Study 2, we examine a 9,400-word corpus of interviews from four elderly Romani-Romanian bilinguals. In Study 3, we conduct an experiment to test short-term priming in adjective/noun order from Romanian to Romani and within Romani. 90 Romani-Romanian bilinguals participated in the study. We adapted the design from the monolingual priming experiment in Ziegler et al. (2019) where a priming trial consists of a sentence trial and a picture trial. Six Romanian-Romani trials tested N<sub>DET</sub>-ADJ prime sentences, 6 Romani-Romani trials tested DET-ADJ-N and 6 DET-N-DET-ADJ prime sentences. We had 20 fillers. We used Bayesian multinomial mixed-effects regression and Random Forests to analyse the experimental results.

Study 1 shows that speakers use the inherited ADJ-N order as the sole or dominant option when they are in contact with languages that also have ADJ-N order, like the Slavic languages. In contrast, in settings where the contact language has a preferred N-ADJ order, as in Romance languages, we note a significant increase in the use of this order in Romani; see Fig. 1. This is most apparent for the speakers from Romania whose responses show up to 70% of N-ADJ order. Study 2 confirms these uses in free speech among elderly Romani-Romanian bilinguals. Study 3 reveals significant cross-language priming effects, whereby speakers favour the use of DET-N-ADJ order in Romani immediately following a  $N_{\text{DET-ADJ}}$  sentence read in Romanian; see Fig. 2.

To conclude, our aim here is to illustrate a unified approach to language contact by introducing theoretical and methodological advances from the field of bilingualism into the study of contact-induced change.

Fig. 1. Percentage of all (DET)-N-ADJ responses in the RMS database by country

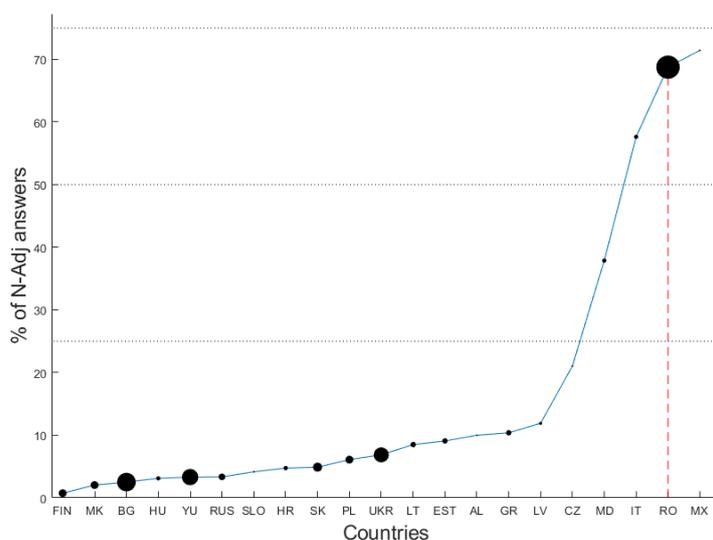
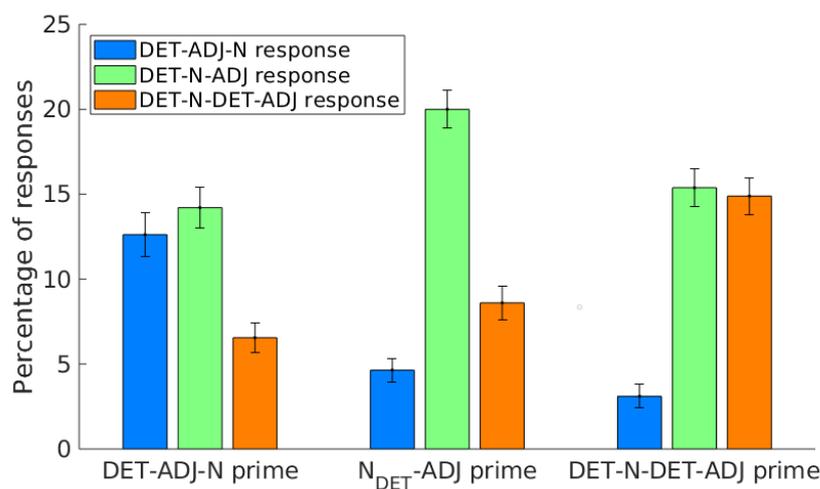


Fig. 2. Percentage of responses in target utterances in Romani as a function of priming type



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Historical intonation and contact: two case studies

Mary Baltazani, Joanna Przedlacka & John Coleman

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## **Influences on Mauritian Creole's early development of past marking**

Hannah Davidson

Creole languages would not exist without language contact and are therefore interesting test cases for theories of grammatical development. Mauritian Creole has two main overt past markers *TI* and *FINN*, which are assumed to have developed from either French *était* or *été* (imperfect/past participle of 'be') and *finir* (finish) respectively (Fon Sing, 2005:26; Grant & Guillemin, 2012:54; Syea, 2013:109). Much previous research has focussed on the importance of just one individual factor in the emergence of tense, mood and aspect (TMA) marking, such as the lexifier, second language acquisition or a known substrate language (Becker & Veenstra, 2003; Corne, 1983).

Instead, this paper takes a more 'holistic' and integrated approach, considering a larger number of potential influences spanning natural language change, substrate influence, lexifier and second language contributions to the early development of *TI* and *FINN*. It also investigates the potential influence of Yoruba, a substrate language which has not yet been explored in the Mauritian context. In the case of Creoles, it doesn't make sense to consider grammatical development as independent of language contact, precisely because the extreme language contact was the impetus for its emergence in the first place.

Diachronically, cross-linguistic tendencies predict a drift from perfect to perfective marking, and I hypothesized that *FINN* would follow this trajectory. However, *FINN* already showed perfective usages in its early attestations, so it is not obvious that this marker has gone through all the stages expected by traditional grammaticalization paths (e.g. Bybee et al., 1994). I propose that the many

converging influences at play in its early development can explain why it diverges somewhat from expected development paths.

Heine & Kuteva (2003:562) argue that internal and external language change, often assumed to be mutually exclusive in traditional approaches, can co-occur and reinforce each other in what can be referred to as ‘contact-induced change’. With specific reference to Creoles, Bruyn (1996:42) distinguishes three types of grammaticalization:

1. *ordinary* (gradual and language-internal);
2. *instantaneous* (considerably more rapid than usual in languages with a longer history);
3. *apparent* grammaticalization (the process did not take place in the Creole itself).

*TI* already entered the Creole with a grammaticalized past meaning so can be considered a case of *apparent* grammaticalization. *FINN* is more difficult to categorize, showing instances of both *ordinary* and contact-induced change. I argue that in the case of *FINN*, previous research has over-emphasised the influence of some input languages over others and ignored the role of natural language-internal change. Regarding *TI*'s development, I propose that both *été* and *était* should be considered sources, since the first slaves would not have perceived any difference due to the limited vowel system of their mother tongue, Malagasy. This provides a parsimonious explanation for *TI*'s distribution, occurring in both perfective and imperfective contexts.

Only by considering a full range of factors can we begin to understand the complex language contact situation which led to a Creole's emergence.

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## Political influence and competing grammars in language contact: Variation between *este* and *aqueste* in medieval Aragonese

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Keywords: Iberorromance; historical morphosyntax, demonstratives, medieval Aragonese, language contact

Medieval Ibero-Romance languages exhibited variation between short and long variants of the demonstratives (i.e. Spanish *este* and *aqueste*, respectively, both meaning ‘this’). Data collected from notarial documents (cf. Enrique-Arias 2018) shows that in most Ibero-Romance varieties (Galician-Portuguese, Leonese, Castilian, Navarrese) long forms such as *aqueste* were a small minority throughout the Middle Ages to disappear altogether by the 1600s. Catalan is a notable exception: in this language the long forms (i.e. *aquest* as opposed to short form *est*) were almost categorical from the earliest texts and have continued to exist to this day.

This research focuses on the peculiar situation of Aragonese, which experiences a spectacular increase in the frequency of *aqueste* type forms throughout the 14<sup>th</sup> century to become almost categorical at the beginning of the 15<sup>th</sup> century. Shortly after, however, the long forms declined rapidly and disappeared in the 16<sup>th</sup> century. The initial increase seems to be attributable to contact with Catalan, but this trend was reversed during the 15<sup>th</sup> century, presumably due to the abandonment of the Catalan linguistic model that radiated from the Royal Chancellery and its replacement with Castilianized forms (Enguita Utrilla 2004: 578-582).

In this paper I argue that the abrupt changes involving the distribution of *aqueste* type forms in Aragonese legal documents do not reflect directly the vernacular of the speakers but rather obey to changes imposed from above. As such, the variation found in the data follows alternating scriptural models –first Catalan, and later Castilian– dictated by the successive power centers to which Aragon is subjected. Throughout the Middle Ages the Crown of Aragon, which also included the Principality of Catalonia, was ruled by a Catalan-speaking dynasty and for the most part the Royal Chancellery issued its documents in Catalan; this situation changed dramatically after 1412, when the Crown of Aragon was taken over by the Castilian-speaking Trastámara rulers; a few decades later there was a dynastic union with Castile under the Catholic Monarchs (Isabella and Ferdinand) which further increased the political and cultural Castilian influence among the peninsular kingdoms.

In order to investigate this issue I analyze aspects such as the precise geographical distribution of the short and long variants, the realm where legal documents were issued (ecclesiastical, municipal or private), as well as additional texts from different typologies, such as documents of the Royal Chancellery and literary texts. The analysis of these elements suggests that the categorical use of long forms in early 15<sup>th</sup> century Aragonese documents does not correspond with the vernacular use of the speakers: if this feature were a vernacular trait we would typically find some kind of continuum or gradation between Aragon and eastern Castile but rather it coincides precisely with the political borders of the kingdom of Aragon; likewise the lower frequency of long forms in certain registers indicates that this is not a universal phenomenon reflected in all Aragonese written manifestations. In sum, the new data allows us to reexamine the historical evolution of the Aragonese demonstratives in a language-contact situation.

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## **Specialist discourse, language contact, and language change: Observations from Amazonia**

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Keywords: Amazonia, ritual language, language contact, Upper Rio Negro, historical linguistics

While much work on language variation and change has stressed the view that “all linguistic processes are social processes” (Enfield 2003:7), relatively little attention has been paid to the ways in which specific (i.e. regionally variable) socio-cultural practices may guide processes of language change in particular ways. In this paper, I explore the hypothesis that specialized and ritual discourse forms – notably song, myth, and shamanic language – are relevant loci for the development and propagation of linguistic innovations in the Amazon basin, including those associated with language contact. This possibility is suggested by a number of observations regarding these discourse forms across the region: their extensive circulation and close replication across speakers, communities, and languages (e.g. Beier et al. 2002, Epps & Stenzel 2013); their importance within multilingual regional communicative networks; and the social position of the specialists themselves, who tend to bring together both diffuse social networks and relatively high status. Of particular note is the tendency for specialized discourse in Amazonia to involve alternative lexical and morphological forms, such that the diversity of lects and registers figures in a broader constellation of multilingual interaction – well beyond the languages ‘proper’ that are associated with geographic and ethnic distinctions. These linguistic practices may be understood as crucially anchored in cosmological approaches that emphasize “moments of openness to other perspectives” (Oakdale 2009:161), as centered in ritual and spiritual contexts, and which are widely encountered among lowland South American peoples.

As I lay out here, Amazonian specialist discourse offers a rich context for variation to emerge, persist, and propagate. While demonstrating a concrete directional link from particular registers, styles, or genres to more everyday discourse is complex, I identify several examples of lexical and grammatical change in Amazonian languages, focusing on those of the Upper Rio Negro (Vaupés) region, that have plausible ties to specialist discourse. In the lexicon, for example, many western Amazonian languages exhibit synonym sets and/or obviously innovated forms, especially for referents that may be understood as spiritually fraught – game animals, animals or plants associated with shamanic practices or taboos (e.g. jaguar, coca), particular place names, etc. (see e.g. Fleck & Voss 2006, Mihas 2019). Crucially, a regular substitution of lexical items with metaphorical or borrowed alternatives is productive and widespread in Amazonian shamanic discourse (Epps forthcoming), and in some cases a direct link between such registers and more everyday uses is transparent, as when synonym choice is associated with particular pragmatic contexts (e.g. hunting). Turning to grammar, specialist discourse may likewise favor particular morphological substitutions and collocations, which in turn may be generalized and extended. For example, in Hup (Naduhup), regional norms in structuring mythic narratives appear to have motivated a routinized collocation of a reported evidential + distant past marker, leading to their fusion as a single portmanteau marker in one Hup dialect (example 1) – mirroring fused tense-evidential suffixes in neighboring Tukanoan languages.

- (1) *j'ǔg-út=maám* (> *mah j'am*) *tih*      *wɔn-kot=máh-ah*  
forest-OBL=REP.DST.CNTR                      3sg      follow-go.in.circles=REP-DECL  
'In the forest, **long ago, they say**, he wandered following (the tapir).'

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## Evolutionary linguistics as a theory of language: Implications for contact-induced change

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Keywords: philosophy of science, theory, evolutionary linguistics, contact-induced change, Indo-Aryan

Chafe (1994: 9) writes that “[u]nderstanding is the ability to relate a particular, spatiotemporally limited observation to a more encompassing and more stable imagined schema, within which the observation has a natural place.” “The observations,” he writes “are often called *data*, the schemas *theories*” (p. 10). Accordingly, one of the long-term goals of linguistics, as a discipline focused on understanding language, has been the development of a theory which adequately accounts for the wide range of data relevant to its domain. In this paper, following Croft (2000, 2011), I argue that evolutionary linguistics can be considered an especially promising approach to theorizing language as a whole. I make this argument by first outlining its general principles, then demonstrating in a top-down fashion how these principles can be used to systematize one research area in particular, that of contact-induced change. While primarily theoretical in my focus, I nevertheless draw from data on the development of Middle Indo-Aryan to illustrate aspects of an evolutionary analysis of contact-induced change.

Evolutionary linguistics, by defining language in terms of exemplar-based knowledge of conventionalized form-meaning pairings, effectively collapses the distinction between synchrony and

diachrony. While synchronic studies may examine the storage and replication of exemplars over the short term, diachronic studies merely expand the scope of investigation by examining exemplar lineages over much longer stretches of time. A focus on the cognitive and social factors (including *mechanisms* and *motivations*, Traugott & Trousdale 2013, *constraints*, Haspelmath 2019, and *biases*, Enfield 2008) ultimately responsible for the storage and replication of exemplars is common to both.

Applied to a case of contact-induced change in particular, an evolutionary account would entail developing a causal analysis of its innovation, the altered replication of an exemplar lineage, and of its spread, its differential replication, across instances of usage and across speakers within a speech community. I illustrate this through a partial analysis of the origin of participle-based past tenses in Middle Indo-Aryan, in which I argue language contact played a decisive role. The particulars of this analysis are supported by converging evidence drawn from the historical record (e.g., Sen 1960, Erdosy 1995, Deshpande & Hook 1979, Deshpande 1979, Reich et al. 2009, Moorjani et al. 2013). While a complete causal account of the change is outside the scope of this paper, and indeed not possible, this case-study serves to illustrate the role of evolutionary theory in structuring an account of contact-induced change, and in providing clear indication of where explanatory gaps in the replication process remain to be investigated. Ultimately, I argue here that a focus on processes of replication and their causes allows for contact-induced change to find its “natural place” within a more encompassing, dynamic theory of language framed in terms of evolutionary principles. This approach is desirable not only because it integrates the various subdisciplines of linguistics, but also because it builds bridges between linguistics and other human and natural sciences.

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Towards a Reductionist View of Language Contact Effects

Brian Joseph  
<not updated>

**Towards a holistic understanding of the linguistic past: the Northern Samoyedic case**

Olesya Khanina & Valentin Gusev

This paper reconstructs history of one linguistic family, Northern Samoyedic (NS; < Samoyedic < Uralic), to contribute to the description of complex reality of languages and protolanguages of the past, advocated by organizers of the workshop. In our research, we integrate findings from historical linguistics with data obtained by methods of sociolinguistics, ethnography, and linguistic geography. As a result, we can realize a move from a static view of idealized languages to intertwined histories of dynamic communities and their changing languages.

First, we have performed analysis of written sources available for the last 300 years (wordlists, grammatical notes, narratives, tribute collection forms, census records, ethnographic records). It has revealed that more variation was attested in the past than today: there were more language varieties and more variation in individual languages. We can also reconstruct several migration events, which, together with numerous bilateral language shifts by smaller groups of people, led to current ‘clear’ distinctions between modern NS languages.

Second, we have realized a study of multilingualism in the area where four of the five NS languages were spoken in the beginning of the 20th century, as well as of language ideologies behind it. This has provided sociolinguistic justification of how language contact and the variation could actually look like in the past.

Finally, we have studied NS isoglosses that disregard the boundaries of tree-like structure otherwise supported by phonological, grammatical, and lexical innovations (e.g. Janhunen 1998). In their entirety, they suggest that numerous wave-like innovations were propagated among NS languages irrespective the original divergence, clearly helping to maintain the language continuum, whose existence was suggested yet by (Helimski 2000), but never substantiated with specific linguistic data.

Turning from this historical reconstruction to present day, we can claim that modern NS languages represent rather accidental fragments of the continuum than perpetuation of separate distinct histories. While the presence of Russian colonizers was weak and traditional social patterns persisted, the languages hardly broke up into reified units, and this was backed up by relational/indexal identities typical for the area (cf. Di Carlo & Good (2014) and Lüpke (2016) for the notions and Anderson (2000: 74-96) for non-NS perspective at the same area).

Summing up, we do not only step away from the monolingual perspective in our thinking about the NS past, but try to provide a practical example of approaches that can be taken to reveal what really happened before present.

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## **On the Grammar of Western Thrace Albanian: What is old or new, what is conduct-induced or areal, and other inextricably intertwined questions**

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Keywords: Western Thrace Albanian, contact/areal features, structural borrowing, typological distance, linguistic ideologies

The linguistic ecosystem of Western Thrace (Evros) constitutes a rather unique setting of high linguistic diversity and multilingualism even by the standards of the Balkans, a linguistic area where a constant and pervasive flow of grammatical features among the Balkan languages has traditionally shaped much of their respective structures (see Friedman 2006): in addition to SMG and local MGDs, Albanian, Turkish (Gagauz and other east Balkan varieties), Bulgarian (Pomak), and Romani, are also spoken in W. Thrace. The focus of this talk is on Evros Albanian, a hitherto almost unknown variety, which was repeatedly transplanted in the past: the ancestors of today's speakers migrated from south-eastern Albania (where various Tosk varieties were spoken) to Eastern Thrace during the Ottoman period (possibly in successive waves), and again, after the exchange of populations between Greece and Turkey of 1922, to Western Thrace, within the borders of the Greek state (Dalatsis 2016).

This is an approach from the point of view of socio-historical dialectology and contact/areal linguistics and the data come from recent fieldwork conducted by the author and from qualitative analysis of all available written sources (Hamp 1965, Sokolova 1983, Johalas 2019 a.o.). The aim is, by presenting some intriguing phonological (e.g. vowel reduction, dispersion asymmetries), morphological (e.g. *izafet* compounds, definiteness marking system), and syntactic (e.g. word order, obligatory clitic doubling) features of this variety, to reveal its eventful linguistic history: similar phenomena in other Albanian varieties and Balkan languages are usually approached as instances of internally-motivated language change, or as shifts in the balance between conflicting intra-linguistic needs (e.g. Demiraj 1996). Some of them are considered as contact-induced or areal in the context of the Balkan Sprachbund (e.g. Sawicka 1997). Crucially, all of them are thought of as diverging steps from an “original” status of the language, an initial point where no such motives and needs were present, and the conditions of contact and convergence had yet to take shape. In other words, a fixed and homogeneous archaic (proto-)stage of a language, towards which our reconstruction efforts are targeted, is almost always presupposed (cf. Laakso 2014). This monolithic approach to language change is a misconception: the structural and social factors of change are ever-present, and in our case the latter acted long before Evros Albanian became separated from the main body of Tosk (for the influence of Greek and Turkish, see Kyriazis 2001, Boretzky 1975).

Thus, contact with Turkish, Greek, and Slavic was not transitory or confined to recent times but lasted for several centuries and included varieties of these languages which were distant from each other in geographical and historical terms (Liosis, to appear). During each period, the heaviest structural consequences were largely dictated by the dominant administrative language of the time and the ideologies accompanying its use, regardless of typological distance. And this leads us to the main research question: what are the implications of such geopolitical and linguistic ideologies (Kroskrity 2004) on our borrowability scales of contact (Thomason 2001)?

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## **Towards an integrated model of change: Language contact, dialect contact, internal variation**

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Keywords: Borrowing, imposition, contact-induced change, dialect contact, variation

In various publications (Lucas 2009; 2012; 2015) I have argued for an approach to contact-induced change based on Van Coetsem's (1988; 2000) distinction between borrowing and imposition. In these works Van Coetsem's approach is adapted and integrated with acquisition-based models of internal change as follows. 1) Imposition is a consequence of the fundamental difference between adult language learning and native acquisition (Bley-Vroman 1989; Bley-Vroman 2009). Imposition is thus

transfer from an L1 to an L2, while borrowing refers to contact-influenced adaptations to the recipient language by native speakers of that language. 2) If change is viewed as change in native grammars, all change is the result of children's exposure to primary linguistic data (PLD) that is different to that of earlier acquirers. Insightful theories of change must therefore capture the major ways in which PLD can be altered. 3) PLD is altered by imposition when L2 speakers with target-deviant production constitute a significant proportion of acquirers' exposure to the recipient language. PLD is altered by borrowing when the performance (not competence; Stolberg & Münch 2010) of a native speaker of the recipient language is influenced by aspects of the source language.

This presentation extends this approach to incorporate changes due to dialect contact and change in monolingual settings, arguing: 1) In dialect contact, speakers borrow, and thus produce altered PLD, but cannot impose, since each speaker communicates in her own variety. 2) But borrowing is not necessary for change, since, unlike with simultaneous acquisition of two native languages (Meisel 2001), children exposed to multiple mutually intelligible dialects acquire a single (variable) grammar from this variable PLD (Trudgill 2004). 3) Purely internal change is just a special case of change through dialect contact on this model, since even in monolingual/monodialectal communities some sociolinguistic variation is inevitable.

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## Multilingual presents as a window into multilingual pasts

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Keywords: small-scale multilingualism; language contact; language ideas; language use; evolution of linguistic settings

On the Upper Guinea Coast of West Africa, longstanding small-scale multilingualism (based on widely shared multilingual repertoires in rural communities at a very local scale) interacts with multilingualism in and contact with languages of wider communication at regional, national and transnational levels (Cobbinah 2010; Cobbinah 2019; Goodchild and Weidl 2018; author 2016a and b, 2017, author et al accepted). Individuals have complex linguistic repertoires ranging between 3 and 10 and more nameable languages. These languages comprise closely related lects, languages belonging to different branches of the contested Atlantic family, Mande languages, as well as French in Senegal, English in the Gambia, Portuguese and a Portuguese-based Creole in Guinea Bissau and adjacent regions. Repertoires are shaped by individual trajectories, which give rise to very individual linguistic biographies, but also contain languages that connect people with places, give them land rights and ethnic belonging. Such settings are in all likelihood representative for the circumstances in which human language evolved (Evans 2018), but remain underrepresented in theories of language contact, including those situated in West Africa, which concentrate on contact between language pairs (e.g., Haust 1995) and triads (e.g., Nunez 2015; Nunez and Léglise 2016) or multilingualism and contact in urban settings (Calvet 1994, 1993; Calvet and Dreyfus 1990; Juillard 1995).

Historical data on the local multilingual configurations are not available. Large-scale accounts allow retracing language contact in broad strokes (for instance regarding the spread of Islam, correlated with loanwords from Arabic and other languages associated with Islamic knowledge, the effects of Portuguese-based Creole and colonial languages of European provenance, etc.). Yet, even a bird's eye view reveals that small-scale linguistic patterns observed in the area today reach far back in history (Brooks 1993; Baum 1999), having been already observed by Columbus in the 15<sup>th</sup> century (Green 2019) and their sociopolitical motivations in terms of cohabitation and settlement patterns and the upholding of multiple, adaptive identities and intense social exchanges in order to maximise possible political alliances in an area deeply affected by the trans-Saharan and trans-Atlantic slave trade (Green 2012). However, multilingualism and contact research are hampered by the great complexity and internal diversity of local settings, the lack of diachronic language data, and the absence of monolingual and homogeneous 'control' or 'baseline' varieties that are commonly used as benchmarks from which to calibrate contact, variation, and change.

In this talk, I use insight on present-day language ideologies manifest in language naming, language territorialisation and language ideas. Correlated with observed patterns of language use and variation as well as the categorisation of linguistic forms by different speakers, they allow painting a fine-grained picture of synchronic multilingualism, contact, and its motivations (author accepted). I correlate this portrait with known historical facts, such as recorded glossonyms, word lists, language associations with locations and known migration and settlement patterns over the past 700 years, arriving at a holistic model of the development of multilingual ecologies. I postulate a constant templatic infrastructure adapting to changing social environments while retaining cultural continuity.

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## **Tracing inheritance and contact in Bantu languages: Evidence from morphosyntactic variation**

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Keywords: Bantu languages, language contact, language change, morphosyntax, variation

With about 350-400 languages, the Bantu family provides valuable empirical evidence for the study of language relationship and micro-variation. Traditionally, research in comparative Bantu has focused on the study of innovation and divergence, with a view to developing a genetic sub-classification of Bantu languages (e.g. Heine et al. 1977, Ehret 1999, Nurse and Philippson 2003). Recent work by

Grollemund et al. (2015) has proposed a genetic sub-classification of Bantu based on a phylogenetic study of a comparative word list of 100 lexical items, which is then correlated with historical and archaeological data. However, convergence effects in Bantu have also been noted (e.g. Möhlig 1979, 1981, Marten et al. 2007), and have been related to the dynamics of multilingual language ecologies and language contact. Focussing on convergence effects, rather than on shared innovations, may result in a different picture of the relationship between Bantu languages.

In this talk we further develop the idea that different structural relations obtain between the Bantu languages, and use these insights to more closely examine contact within the language family. We employ phylogenetic methods to compare lexical and morphosyntactic data of the same languages and show that they indeed result in different groupings. Taking the lexical classification proposed by Grollemund et al. (2015) as a starting point, we develop a phylogenetic analysis of 35 Bantu languages based on 136 morphosyntactic features (Guérois et al. 2017) from data in the Bantu Morphosyntax Variation database (Marten et al. 2018).

The results indicate a difference between lexical and morphosyntactic groupings:

- The main division of the lexical classification related to geographic distribution – roughly, East vs. West
- In contrast, division of the morphosyntactic classification can more easily be related to a division between Centre and Periphery
- While some smaller sub-groups of the lexical classification are also found in the morphosyntactic classification (e.g. Southwest, Northwest, and Southeast), others are not recognisable (e.g. East and Great Lakes)
- The results from the sub-set of features yield ambiguous results, not easily relatable to the results of the whole set of features

In addition to establishing the difference between the two datasets, we seek to account for how the differences can be explained. The discussion considers whether:

- morphosyntactic variation is constrained differently than lexical variation
- there are differences in acquisition of lexicon vs. grammar (both in L1 and L2)
- socio-historical insights can be gained from the morphosyntactic groupings, specifically as these relate to language contact
- to what extent lexical and structural similarity reflect inheritance and contact differently
- specific (groups of) features are responsible for the overall differences

The talk shows the value of morphosyntactic data for comparative Bantu, and the use of quantitative methods for the study of morphosyntactic variation, both in Bantu and more broadly. The results shed light on the relation between inheritance and language contact in closely related languages.

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Dialectology, typology and variation: the theory of ‘Balkan Indo-European’ and its implications for the history of the Ancient Greek dialects

Wojciech Sowa  
<not updated>

## Language contact in South Asia – typology meets diachrony

Krzysztof Stroński

The main objective of the present paper is to demonstrate that integration of two recent approaches in the areal studies on South Asia, namely large scale typological investigation based on advanced statistical methods and diachronic corpus oriented studies bring us closer to better understanding of the diachrony of language contact phenomena in the region.

As a point of departure we take the work by Peterson (2017) who presents results of an analysis of the distribution of 28 features in 29 languages belonging to Indo-Aryan, Dravidian and Munda which were visualized by means of NeighborNet representation and UPGMA tree, giving us a solid basis for assuming the division of eastern and western Indo-Aryan into two distinct structural groups. This kind of approach stands in contrast to previous attempts to define South Asia as a linguistic area by means of a number of features (Emeneau 1956; Masica 1976; Masica 2001 to name a few). Despite its clear synchronic bias such analysis has important implications for the linguistic prehistory of the region. However, features attested in contemporary tongues require further verification in older varieties spoken once in the region (for which we have reliable written records). Thus a long-standing desideratum is a diachronically oriented work on previously established feature-distributional patterns (cf. Masica 2001: 259; Peterson 2017: 245).

In the pilot study we have focused exclusively on a few early New Indo-Aryan (NIA) varieties from India and Nepal which include Rajasthani, Awadhi, Braj and Dakkhini (a sample of 10000 words for each) supplemented by the data from early Nepali, Kumaoni, Kashmiri as well as Maithili. These have all been annotated (cf. Jaworski 2015) and features primarily analyzed in the Peterson’s sample have been verified and their diachronic development and distributional patterns have been checked.

Here we present only three features that have been selected and analyzed diachronically: ergativity, classifiers and word order. Preliminary results show that:

- a) Ergativity has a number of areal skewings from a basic pattern (e.g. NP splits, maintaining object-verb agreement despite object marking, subject verb agreement etc.) and it makes a quite clear boundary between west and east attested the area of Awadhi around the 15/16<sup>th</sup> where language contact could accelerate a constant drift towards nominative typology (cf. Autor 2012).
- b) Classifiers is an assumed contact induced phenomenon, now restricted in IA to Magadhan languages (cf. Barz 1985) but they are also found in Awadhi and Nepali. In early Awadhi no classifiers are found. They are attested in early Nepali inscriptions (14th century) but not present in the adjacent Kumaoni (cf. Chalise 2015).
- c) Word order in early NIA is not stable. Contemporary NIA represent chiefly an SOV type except Kashmiri, which has a default V2 word order. However, rigid V2 word order is not yet found in 15th century Kashmiri. Instead we found evidence of a general tendency to move the verb towards a more initial position and it coincides with several modern Pahari varieties (cf. Author and Co-author 2020).

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Contact as alignment: Community norms in bilingual Ontario

Sali Tagliamonte  
<not updated>

Language contact effects are bidirectional: morphosyntax and the view from feature interpretability

Ianthi Tsimpli, Alexandra Prentza & Maria Kaltsa  
<not updated>

Focus (on) clefts: aspects of gradience in bidialectal acquisition

Stavroula Tsiplakou  
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## WORKSHOP 20

### Word Order and Prosody

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**Keywords:** word order, syntax, prosody, variation, externalization, interface

#### Description.

Human languages display non-trivial variation in word order patterns. There are nonetheless many ways in which linguistic variation appears to be limited, and one of the great achievements of linguistics have been the documentation and systematization of such limits, for instance in the form of Greenbergian typological generalizations. Linguists from different traditions have been exploring these questions, seeking to refine and explain such observations.

In the generative tradition, universal architectural constraints have been proposed which limit the types of processes and operations that are available across languages. Thus, aspects of syntax such as e.g. locality and c-command (hierarchical relations) have been shown to play a fundamental role in the computation of syntactic dependencies, and in determining in part what *possible languages* are, and the patterns of word orders they can or cannot display (cf. Newmeyer 2005 for discussion). In this tradition, the ‘classical’ models of the architecture of language assume that the syntactic component is autonomous regarding phonology and semantics. They also conceive prosody as a component which merely interprets the output of syntax. Under this view, thus, PF is a level of phonological representation which cannot directly affect the syntactic structure of sentences (cf. Chomsky 1957; Chomsky & Lasnik 1977; Pierrehumbert 1980; Selkirk 1981, 1984; Chomsky 1995).

However, recent proposals are assuming a more active role of PF in the structure of language. In many recent approaches, the externalization component is no longer conceived as a mere interpreter of its input, but as an active component affecting aspects of the grammar that were traditionally attributed to the syntactic component in previous analyses (cf. Anttila 2016 for an overview).

In particular, a range of word order-affecting phenomena have been claimed to be rooted in the PF component. Recently, the Final-Over-Final Condition (FOFC) has been linked to the PF branch of derivations, arguing that it is sensitive among other things to copy-deletion, or more generally to the phonological content of the exponents (Sheehan 2013; Etxepare & Haddican 2017; Duguine 2020). Likewise, focus and nuclear stress are characterized as triggers for scrambling and different word orders in ‘discourse configurational languages’ (Zubizarreta 1998; Reinhart 2006). Prosodic phrasing restrictions are also analyzed as driving the choice of interrogative strategies across languages (Richards 2010; Kandybowicz & Torrence 2015; Mathieu 2016), and prosodic optimality restrictions could also be affecting the position an element will be spelled out in, explaining clitic-placement, verb-second effects, Heavy NP Shift and a range of other phenomena (see Zec & Inkelas 1990, Bošković 2001, 2018; Nunes 2004; Speyer 2010; Sabbagh 2013; Bennett, Elfner & McCloskey 2016; Holmberg, Sakhai & Tamm 2020, among others). In parallel, the literature on early processing and language acquisition has uncovered that prosodic patterns could play an important role in linguistic development, biasing the choices of word order, as in the prosodic bootstrapping hypothesis (Mehler et al. 1988; Christophe et al. 2003; Bernard & Gervain 2012). Last, some theoretical works have even proposed radically new architectures such as the ‘parallel architecture’ of language proposed by Jackendoff (1997, 2002), according to which all modules of grammar (phonology, syntax and

conceptual structure) create their own derivations in a parallel fashion, with correspondence rules linking the different derivations (some rules linking phonological structures and syntactic structures, some rules linking syntactic structures and conceptual structures and others linking phonological structures and conceptual structures).

We invite abstracts that explore the role and function of prosody and PF processes within the general architecture of language, from theoretical and experimental angles, addressing especially the issue of word order in any relevant language. In particular, questions that the workshop seeks to address include – but are not limited to – the following:

- What are the domains of phonology that can condition word order effects? The metrical prominence of prosodic constituents in terms of word-level or phrasal stress, their size and prosodic category, their ‘weight’, the rhythm, and/or phonotactics?
- What are the domains of phonology that can condition word order? The metrical prominence of prosodic constituents in terms of word-level or phrasal stress, their size and prosodic category, their ‘weight’, the rhythm, phonotactics?
- What ordering phenomena can prosody and PF processes explain (wholly or partially)? Focus-movement, wh-movement *vs.* wh-in-situ, verb-fronting strategies such as V2, verb-object/object-verb alternations, clitic-placement, compounding, incorporation, rightward movement, the Final-Over-Final Condition (FOFC)?
- Are there universal trends in how prosody influences syntax and patterns of word order across languages? What correlations can be observed across languages between prosodic structure and word order?
- Are the effects of prosody on word order gradient or categorical?
- Can syntactic constraints be violated for the good of prosodic constraints?
- Does prosody act as a filter on different outputs of syntax, as a component where syntactic structures can be ‘repaired’, and/or as a component with a primary algorithm that linearizes syntactic structures?
- What role does prosody play in the acquisition of word order (cf. the prosodic bootstrapping hypothesis)? Which aspects of prosody are the crucial ones for biasing parametric choices?
- What role does prosody play in language change and linguistic variation? Does it trigger cascade effects and macro-parametric changes?
- How does the prosodic conditioning of word order manifest itself in sign languages?
- What are the consequences for the architecture of the grammar? Does prosody affecting word order imply that the relationship between phonology and syntax must be re-evaluated in the architecture of grammar, that they in fact mutually interact? Or inversely, does it strengthen the ‘radical externalization’ approach, word order being at the hands of externalization-based algorithms?

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## Verb-first restrictions in two varieties of Basque

Ricardo Etxepare

Keywords: auxiliaries, edge conditions, Basque, focus, word order

The asymmetry in basic word order between affirmative and negative sentences in Basque is a classical problem in Basque theoretical syntax (Laka 1990; Elordieta 2001; Irurtzun, 2007).

- (1) a. Etorri da  
Come is  
“*He/she has come*”  
b. Ez da etorri  
NEG is come  
“*He/she has not come*”

In recent decades, a body of work has developed in which this asymmetry is seen in relation to another property of the Basque finite forms: finite forms cannot occur first in the sentence (see recently Elordieta and Haddican, 2018).

- (2) \*\_dator  
3s.comes

Under this view, (1a) is the result of predicate fronting (Haddican, 2004) and (1b) follows from the insertion of the negative particle in a preverbal position, shielding the finite verb from first position. Haddican and Elordieta (2013) propose the following descriptive condition:

- (3) *Edge condition (simplified)*  
No Basque finite sentence without a functional projection (call it X) that precedes the finite verb, and which must be overtly filled, alternatively by negation or the verbal predicate.

Interestingly, the set of configurations that can rescue the finite verb from first position are not identical across Basque dialects. Eastern dialects (4a) allow *wh*- and focal operators to immediately precede the auxiliary (Duguine and Irurtzun, 2008). Central varieties don't. And only eastern varieties allow orders in which the verbal predicate and the auxiliary are separated by something else, typically an additive marker of the *even/also* sort (4b, from corpus).

- (4) a. Nor/ XABIER da etorri (?)  
who/Xabier come is  
“*Who came?/XABIER came*”  
b. Errabia batek hartu ere du  
rage one.ERG taken also has

“She/he has also been overcome by rage”

I show that the dialectal differences follow from the different status of auxiliaries in each of those varieties. Eastern copulas can be “synthetic verbs” in Eastern Basque, but not in central dialects. Synthetic verbs are finite verbs which, unlike auxiliaries, possess a lexical root (De Rijk, 2008). Assuming verbal predicate fronting for (1a), the presence of a synthetic auxiliary has an effect in the available rescuing configurations. Consider (5), with a synthetic auxiliary:

(5)  $[_{XP} X^0 [_{TP} du [_{VP} \mathbf{root} [_{AspP} \dots \mathit{erosi} \dots]]]]]$

The verbal predicate (root-headed verb phrase) cannot be fronted, as it must merge with T. But it intervenes between X and the lower verbal predicate, thus blocking any further predicate fronting. In dialects allowing (4), Basque resorts to an alternative strategy: it projects a higher functional head, Focus, and attracts a term to its outer edge (yielding 4a,b). In other words, the Edge condition is satisfied further up when predicate fronting is not available.

- (6) a. LIBURUA du Jonek erosi  
book.ABS has Jon.ERG bought  
“It is the BOOK that Jon bought”  
b.  $[_{FocP} LIBURUA Foc [_{XP} X^0 [_{TP} du [_{VP} V \mathbf{root} [_{AspP} \dots \mathit{erosi} \dots]]]]]]]$

If this analysis is correct, the Edge condition (in Basque, and we may contend, beyond) is not tied to a particular functional head (X in (3)), but is a more global condition on the phonological anchoring of left edges.

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The role of prosody in a typological survey of discontinuous nominal phrases

Caroline Fery & Gisbert Fanselow

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## The influence of rhythm on placing the German object pronoun

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Keywords: Rhythm, word order, speech, written production, German language

What determines the variable placement of the object pronoun in the German middlefield? With three experiments, we assess the effect of linguistic rhythm on word order. Rhythmic influences on word order have been documented (see, e.g. Anttila, 2016 for a review), but they appear to be rather limited in scope (Kentner & Franz, 2019). Here, we study word order preferences in embedded complementizer clauses (1). We systematically varied the stress pattern of the embedded subject (iambic, trochaic name) and of the embedded verb (initial syllable stressed vs. unstressed). In the non-canonical OS-order, a trochaic name following the inherently unstressed object pronoun (*ihn Márkus*) yields a rhythmically alternating and hence more favorable structure compared to an iambic name (*ihn Marcél*). Conversely, in canonical SO-orders, the unstressed pronoun following the stressed syllable of an iambic name is rhythmically favorable (*Marcél ihn*). Accordingly, we predict that trochaic embedded subjects promote OS order and iambic names promote SO order. This prediction was largely borne out in a pilot experiment (questionnaire) with written stimuli like (1).

(1a) Der Júnge ságt, dass ihn Márkus/Marcél belúgt/áuslacht. (OS)

(1b) Der Júnge ságt, dass Márkus/Marcél ihn belúgt/áuslacht. (SO)

*The boy says that Markus/Marcel is lying to / laughing at him.*

We conducted two sentence production experiments (spoken and written, 50 German-speaking participants). Stimuli were 128 professionally drawn black and white pictures. Spoken and written sentences ( $n=4679$ ) were coded and analysed using general linear mixed effects models. The dichotomous response variable was the word order produced (SO vs OS). Predictor variables were the stress patterns of the embedded subject and the embedded verb, and the animacy of the matrix subject (human, non-human) that is the referent of the object pronoun.

In spoken and written production, participants preferred SO sentences over OS sentences (64.2%;  $z=9.6$ ). In spoken production, OS was less preferred than in written production (34.5% / 38.2%;  $z=2.6$ ).

In both modalities, the stress pattern of the embedded subject had an impact on word order, as long as the animacy degree of all referents was constant: In the human subset, participants preferred OS more often when the embedded subject was trochaic ( $z=2.1$ ), promoting rhythmic alternation. This is in line with Franz et al. (2020) where we showed this interaction of rhythm and animacy for the word order of isolated conjuncts. However, the stress pattern of the embedded verb turned out to impact word order significantly in written production ( $z=2.0$ ), but only marginally in spoken production ( $z=1.8$ ). Further, we found that the rhythmic structure of the embedded subject and the verb do impact word order - independently of the animacy degree - when both rhythmic factors favour OS or SO simultaneously ( $z=2.5$ ). All in all, our results are in line with the questionnaire study and strengthen a bidirectional account of syntactic and phonological processing in sentence formation (Breiss & Hayes 2020).

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## Prosody-induced word order variation in Ancient Greek? Evidence from Herodotus' *Histories*

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Keywords: Ancient Greek, word order, prosody, intonational contours, discontinuous constituents

Ancient Greek has been classified as a discourse-configurational language. The aim of this paper is to show that word order variation in the Ancient Greek clause was not only sensitive to information-structural distinctions (Dik 1995, Matic' 2003, Bertrand 2010, Goldstein 2016), but also indicative of the status of the clause within the overall sentence. Functionally, the resulting word order patterns are thus reminiscent of the distinctions between terminal and non-terminal prosodic contours in modern languages.

Based on the presentation of primary data collected in a corpus study on Herodotus' *Histories*, the paper argues that prosody – as a more direct means of expressing pragmatic distinctions – might not only have determined the boundaries of word order domains in Ancient Greek (*chunking*, cf. Slings 2002; Scheppers 2011), but probably also had an impact on the ordering of elements within these domains.

TERMINAL: | ZYX |

[...] | εἴ οἱ | [πολυχρόνιος]<sub>z</sub> [ἔσται]<sub>y</sub> [ἡ μοναρχίᾳ]<sub>x</sub> |  
*eí hoi* | [*polykhronios*]<sub>z</sub> [*éstai*]<sub>y</sub> [*hē mounarkhiē*]<sub>x</sub> |  
if he.DAT longlasting.NOM.M/F.SG be.FUT3SG ART.DEF.NOM.F.SG monarchy(F).N.SG  
'whether his sovereignty should be of long duration' (transl. Godley)  
(Hdt. 1.55.1)

NON-TERMINAL/COORDINATE: | ZXY |

ὥς δὲ | [τρίτῃ ἡμέρῃ]<sub>z</sub> [τῷ παιδίῳ ἐκκειμένῳ]<sub>x</sub> [ἐγένετο]<sub>y</sub> | [...]  
*hōs dē* | [*trítē* *hēméré*]<sub>z</sub>  
when PTCL.but third.NOM.F.SG day(F).SG

[*tōi paidiōi ekkeimēnōi*]<sub>x</sub> [*egéneto*]<sub>y</sub> |  
ART.DEF.DAT.N.SG child(N).DAT.SG to be cast out.PRT.PRS.DAT.N.SG become.AOR3SG  
'Then on the third day after the laying out of the child'  
(Hdt. 1.113.2)

NON-TERMINAL/SUBORDINATE: | ZYZ | X |

ἐπειδὴ | [τεσσερεσκαιδεκάτη]<sub>z</sub> [ἐγένετο]<sub>y</sub> [ἡμέρη]<sub>z</sub> | [πολιορκεομένῳ Κροίσῳ]<sub>x</sub> | [...]  
*epeidē* | [tessereskaidekátē]<sub>z</sub> [egéneto]<sub>y</sub> [hēmérē]<sub>z</sub> |  
 when fourteenth.NOM.F.SG become.AOR3SG day(F).NOM.SG  
 [poliorkeoménōi Kroísōi]<sub>x</sub> |  
 besiege.PRT.PRS.MP.DAT.M.SG Croesus(M).DAT.SG  
 ‘When Croesus had been besieged for fourteen days’  
 (Hdt. 1.84.4)

As the examples above show, at least three patterns can be discerned: Firstly, a terminal one, where a narrow focus is followed by the remaining elements of the clause in reversed order of increasing information-structural import (cf. the notion of *communicative dynamism* in Firbas 1992, represented by the letter indices above). Secondly, a non-terminal/coordinate one, where a narrow focus is followed by the remainder of the clause in normal order of information-structural import. Thirdly, a non-terminal/subordinate one, where the focus is split over two non-adjacent elements interrupted by an element of lesser information-structural import, optionally followed by the remainder of the clause. This third pattern, which can but need not involve discontinuous nominal expressions, will be interpreted as a manipulation of the pragmatic principle of diagrammatic iconicity (*pace* Deligianni 2013), serving the purpose of expressing the feature-combination [-terminality] [+subordination] (for a similar argumentation cf. Maskikit-Essed/Gussenhoven 2016 concerning increased final syllable lengthening in non-terminal Intonational Phrases in Ambonese Malay).

The paper thus also contributes to the typological discussion of discontinuous nominal expressions, identifying the signalling of non-terminality plus pragmatic subordination as a third cross-linguistically attested function alongside the marking of IP- and clause-internal contrast and sentence focus (cf. Schultze-Berndt 2008, Schultze-Berndt/Simard 2012; Reinöhl 2020).

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## Syntactic and typological issues with word order anomalies in Tigrinya

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Keywords: adpositions, genitives, PF, Tigrinya, word-order

In this paper, I investigate word order anomalies in Tigrinya (a Semitic language, mainly spoken in Ethiopia and Eritrea). Tigrinya exhibits properties of mixed word order – both head-final and head-initial – that appear to be problematic for certain theoretical approaches. For example, Tigrinya has prepositions (1b), even though the basic clausal word order is S-O-V, as illustrated in (1a) (cf. Greenberg Universal 4). Typologically, this property makes Tigrinya one of very few languages with very uncommon word order correlations. According to Dryer (2013), the combination of OV order with prepositions is found in only 14 languages out of the 1142 languages surveyed in the World Atlas of Language Structures (WALS) (Feature 95A).

- (1) a.    ʔit-a    ʔanč'iwa       ni-t-a   dimmu       səg<sup>w</sup>ig<sup>w</sup>-a-tta  
D-f.sg   mouse           ACC-D-f.sg   cat chase.PF-3fsg.Subj-3fsg.Obj  
'The mouse chased the cat.'
- b.    [<sub>PP</sub>   bi-məkina]    [<sub>PP</sub>   mis   ħaft-u]       məs'iʔ-<sub>u</sub>  
          by-car           with   sister-his       come.PF-3m.sg.Subj  
'He came with his sister by car.'

In addition, nominal constituents in Tigrinya exhibit mixed word order properties: while nominal modifiers, such as adjectives and relative clauses, occur in a pre-nominal position (2), other constituents, namely, genitives appear in a post-nominal position (3) (contrary to Greenberg's (1966) Universal 2/5).

- (2)    ʔit-a    [<sub>RC</sub> timali       zi-məs'ə-t]                   [<sub>AP</sub> s'ibbiX'ti]   səbəyti  
D-f.sg   yesterday       REL-come.PF-3fsg.Subj       beautiful       woman  
'the beautiful woman who came yesterday'
- (3)    [nay    ʔit-om       məmahiran]    gəzawti  
POSS   D-m.pl       teachers       houses  
'The teachers' houses'

The above two word order properties of Tigrinya raise the question of whether such mixed word order facts are some kind of typological anomalies or they are somewhat separate phenomena that appear to exist due to different grammatical effects. In this paper, I argue for the latter interpretation, specifically, claiming that Tigrinya prepositions are best analyzed as linkers/morphological realizations of functional heads inserted post-syntactically at PF (see Kramer and Baker 2014 on

Amharic, Duguine 2020 on Basque, among others; see also McFadden 2004 for a general discussion) and that Tigrinya genitives appear post-nominal in the nominal spine because they involve head-movement, an operation considered to be a PF phenomenon (cf. Chomsky 2000; see also Matushansky 2006, Roberts 2010, Platzack 2013, among others).

If the account for the mixed word order facts is right, it has the advantage of making Tigrinya as typologically typical, conforming to Grimshaw's (2005) extended projection. It also has the advantage of accounting for the unusual distribution of some of the morpho-syntactic items within the nominal and clausal domains conforming to Biberauer et al.'s (2014) Final-Over-Final-Constraint, a constraint suggested to be universally unattested (see also Biberauer 2017 for current discussion).

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## Word order and intonation of wh-questions in Urdu

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Keywords: word order, wh-questions, prosodic prominence, Intonational Phrase, Urdu

Urdu allows in-situ as well as scrambled wh-phrases (Kidwai 1999, Manetta 2010). Butt et al. (2016) is the only attempt to understand the interaction between word order and intonation of wh-questions in Urdu. Investigating the immediately preverbal and postverbal wh-phrases, they found that the position of wh-phrases affects their intonation as the immediately preverbal wh-phrases carry higher F0 peaks as compared with their postverbal counterparts. It is not known, however, if the placement of wh-phrases at other positions affects their F0 contour and the intonation of the wh-questions. Moreover, it is unclear if the intonation of wh-phrases in-situ differs from that of their scrambled variants.

This study aims to address these questions and reports a production experiment investigating the intonation of wh-questions with varied word order. Eleven speakers of Urdu produced wh-questions with a wh-phrase placed at either the sentence initial, medial, immediately preverbal, immediately postverbal or final position (1). Three wh-phrases *kis=ne* ‘who’, *kis=ko* ‘(to) whom’, and *kə.hā* ‘where’ were used in the experiment. The F0 contour and peak scaling of target sentences was analyzed using Praat (Boersma and Weenink, 2013).

(1) **(kis=ne)**      nɛ.nɑ=ko      **(kis=ne)**      zə.li:l      **(kis=ne)**      kər-vɑ-jɑ  
 who=Erg      Naina=Acc      who=Erg      humiliated      who=Erg      do-Caus-  
 M.Sg

**(kis=ne)**      t̪ʰɑ      **(kis=ne)**  
 who=Erg      be.Past.M.Sg      who=Erg

‘Who had caused Naina to be humiliated?’

Results show that the intonation of wh-phrases is influenced by their position. The wh-phrases placed before the verb carry the highest F0 peak. The wh-phrases placed after the verb, however, may be accentless. This variation in their F0 may be explained with reference to the alignment of prosodic prominence. When placed before the verb (initial, medial, immediately preverbal), wh-phrases carry the prosodic prominence indicated by their alignment with the highest F0 peak in the sentence. At the immediately postverbal and final positions, the wh-phrases are optionally prominent as the preceding verb could carry the prosodic prominence. In that case, the verb is produced with a rising contour and the following wh-phrase is accentless. Moreover, the intonation of wh-phrases in-situ does not differ from their scrambled counterparts as long as the wh-phrase is placed before the verb.

Furthermore, it was found that wh-questions were mostly produced with a low Intonational Phrase (IP) boundary. An effect of word order was observed here as well. The questions with sentence initial and medial wh-phrases were produced more frequently with a high IP boundary (31% for initial, 28% for medial) as compared with questions containing immediately preverbal (20%), immediately postverbal (6%), and final wh-phrases (14%).

These results offer a novel insight into how the overall intonation and the realization of IP tones in wh-questions in Urdu is affected by word order. The current study testifies to a complex relationship between word order and intonation that can not be explained by in-situ placement or scrambling of wh-phrases. These findings also support the need to study other languages that allow the scrambling of wh-phrases to further understand how word order interacts with intonation contour.

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## Prosodic Phrasing in Interaction with Word Order and Case Marking in Urdu/Hindi

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**Keywords:** case markers, prosodic phrasing, word order, information structure, Urdu/Hindi

This talk explores the interaction between the case markers and prosody with respect to word order in Urdu/Hindi. Urdu/Hindi displays fairly free word order in that major constituents can freely scramble. This scrambling has been tied to information structural effects (Gambhir 1981), which in turn has prosodic effects (Butt et al., 2020). In our research we show that, additionally, case markers differ in terms of their behavior with respect to prosodic phrasing and word order. The basic phrasal accent in Urdu/Hindi is L\*H whereby the H functions as a boundary tone for the accentual phrase (Harnsberger 1994, Féry 2010, Khan 2016). Focus can be signaled via a high pitch excursion on the LH or post-focal pitch compression (Kügler 2020). It has also been established that there are two basic levels of phrasing in Urdu/Hindi i) accentual phrase (AP) and ii) intonational phrase (Urooj et al., 2020), but it is still unclear what gets phrased into one AP especially with respect to the case markers, which have the morpho-phonological status of clitics.

We conducted a production experiment and collected 1470 productions (5 contexts: 4 case clitics [ergative-ne, instrumental-se, accusative-ko, genitive-ka/ki/ke] and 1 nominative case x 30 sentences x 7 speakers) from 7 Pakistani native speakers of Urdu ( $\emptyset$ Age = 22 years, SD = 2.40 years, 6 Females) to understand the interaction between prosodic phrasing and case marking. We selected mono, bi and tri-syllabic common names for each case phrase ending in the same kind of vowel /a/ across all conditions. All the case phrases (KP) are studied both at sentence initial and sentence medial positions using the following structure shown in (1):

- |     |                                  |               |         |         |
|-----|----------------------------------|---------------|---------|---------|
| (1) | KP                               | NP            | AdvP    | Verb    |
|     | [shah =ko]                       | [meri sahelī] | [andar] | [lai]   |
|     | Shah=Acc                         | my friend     | inside  | brought |
|     | ‘My friend brought Shah inside.’ |               |         |         |

Our results showed: a) unmarked (nominative) NPs often phrase together with a following AP; b) case markers that are phonetically similar but syntactically different (instrumental ‘se’ vs. ergative ‘ne’ and accusative ‘ko’ vs. genitive ‘ka/ki/ke’) exhibit differing pitch excursion size depending on their morphosyntactic properties and their position in a clause. Our overall findings argue for a clear representational separation of prosody and (morpho)syntax that at the same time allows for a complex set of interactions across these independent components of grammar. Our analysis is couched within LFG, whose conception of the prosody-syntax interface (Bögel et al., 2010) and treatment of case

(Butt & King 2004) allows for a full and intuitive analysis of the complex interaction between case, word order, prosody and information structure we observe in our data.

### **Acknowledgements**

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## **Focus word order and Penultimate Lengthening in two Bantu Languages**

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Keywords: DP prosody, nominal structure, Penultimate Lengthening, Xitsonga, Sesotho

Bantu languages generally have a noun-initial DP word order. Bantu languages also allow for demonstratives, and in some languages also the quantifier meaning ‘each, every’, to precede the noun. Beyond this, Bantu languages generally allow changing the relative order of the post-nominal modifiers which leads to subtle (focus-related) changes in meaning but not for adjectives, numerals and possessives to appear before the noun.

Xitsonga (Guthrie code: S53) is spoken by about 5,5 million L1 speakers in South Africa, Mozambique, Zimbabwe. Prosodically, penultimate lengthening (marked with a colon) marks the end

of a prosodic level in Xitsonga: prosodic word, phonological phrase or intonational phrase. Xitsonga also allows pronominal demonstratives, numerals and adjectives (1a.ii, b.ii, c.ii). This word order is associated with focus and the focused element is marked with a longer duration of penultimate lengthening compared to unfocussed elements in non-sentence final position.

(1) Xitsonga noun phrase

a. (i)	va-nhu lá-va	(ii)	lá-vá	vá:-nhu
	2-people		this-2	this-2 2-people
	‘these people’			‘THESE people’
b. (i)	va-nhu va-mbi:rhí	(ii)	va-mbirhí	vá:-nhu
	2-people		2-two	2-two 2-people
	‘two people’			‘TWO people’
c. (i)	va-nhu va-nkú:lú	(ii)	va-nkúlú	vá:-nhu
	2-people		2-big	2-big 2-people
	‘big people’			‘BIG people’

We constructed a set of stimuli that consist of 8 sentences with varying order of the object DP internal elements. The head noun was followed by a numeral, an adjective, a quantifier or a demonstrative. Quantifiers and demonstratives are reported to be in the pre-nominal position in other Bantu languages, but numerals and adjectives are not. The overall results show that the final element (UW) of each sentence has the longest penultimate syllable, and the first element (APW) has the shortest penultimate syllable. The element in a focused position [left panel] have longer penultimate lengthening (in PW). The unmarked order [right panel] exhibits no difference between the PW and penult syllable of the verb of the frame sentence (APW).

The longer penultimate syllable of a focused word has been conjectured in previous studies, but, as far as we know, it was never shown using quantitative methods. The results indicate that the Xitsonga speaker was using the duration of the penultimate syllable, in addition to the word order to signal the focused element of a DP.

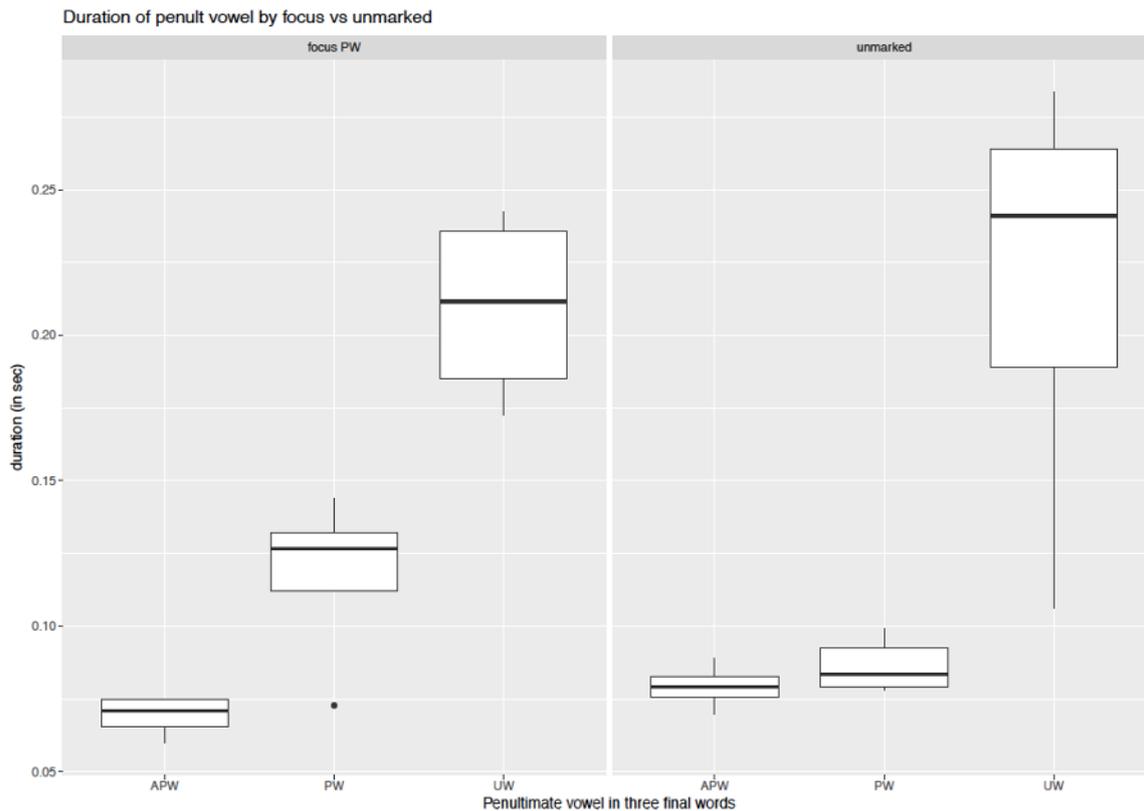


Figure 1. Penultimate lengthening in Xitsonga. The duration of a penultimate syllable is taken from three prosodic words: verb, the head noun and a modifier

Sesotho (Guthrie code: S31), another Bantu language which is also spoken in South Africa and in Lesotho but which is neither geographically nor genetically very close to Xitsonga, shows a comparable pattern. Based on the data from Xitsonga and Sesotho, this paper reports that the pre-nominal elements exhibit longer penultimate lengthening than when the noun is followed by such elements, which suggest that speakers of these two languages are utilizing penultimate lengthening in marking a focus element.

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## The prosodic structure of V2 clauses in Estonian

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Keywords: word order, verb second, sentence prosody, Estonian

Verb-second (V2) is a property of languages whereby the finite verb must be the second constituent of its clause. V2 has been syntactically analysed as arising from 1) the movement of the finite verb to a functional head in the left periphery, and 2) the movement of a constituent to the specifier position of this functional head, blocking the movement of any other constituents to the left periphery (Holmberg 2015).

Estonian is a Finno-Ugric language described as having the V2 property (e.g., Lindström 2017). However, V2 in Estonian does not have the same syntactic basis: two preverbal constituents can move to the left periphery, provided the second one is an unstressed pronoun (Tael 1988, Lindström 2002, Vihman & Walkden 2021). Given the prosodic nature of this exception to V2, it has recently been proposed that the inversion of the order of the subject and the finite verb following a fronted constituent arises in order to satisfy a phonological condition: two constituents move to the left periphery, but a lower copy of the second constituent is spelled out when necessary to satisfy a phonological condition, see Fig. 1 (Holmberg et al. 2020).

In addition to the different behaviour of unstressed pronouns and full syntactic phrases with respect to V2, there is a second prosodic exception to V2: subject-verb inversion following a fronted constituent does not take place when the finite verb receives nuclear stress; a nuclear-stressed verb may also appear lower in the clause (Remmel 1963, Sahkai & Tamm 2019). In summary, in a clause with a fronted non-subject constituent, the order of the subject and the finite verb is inverted, except when (a) the subject is an unstressed pronoun or (b) the finite verb bears nuclear stress. This suggests that the phonological condition that is hypothesised to give rise to the subject-verb inversion is not violated by unstressed pronouns and non-nuclear-stressed verbs but is violated by full syntactic phrases and even more by nuclear-stressed constituents.

The aim of the present study is to contribute to the identification of the location where this phonological condition could potentially apply.

Given the analysis illustrated in Fig. 1, some proposals regarding the syntax-prosody interface (e.g., Hamlaoui & Szendrői 2015) predict that Estonian V2 clauses with the initial constituent in the higher preverbal position correspond to a recursive intonation phrase, while V2 clauses with the initial constituent in the lower preverbal position correspond to a single intonation phrase. The presentation will report the results of a production study that tests this prediction by comparing the boundary cues following the initial constituent in the two types of clause. The goal of the study is twofold: to test the proposed syntactic analysis of Estonian V2 order, and to pursue the hypothesis that the left edge of a minimal intonation phrase is the target of the hypothetical phonological condition that gives rise to the subject-verb inversion in Estonian V2 clauses.

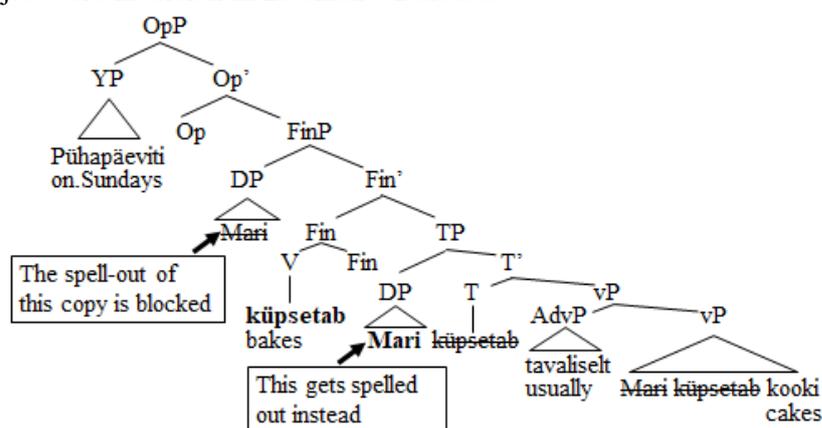


Figure 1. The derivation of the sentence *Pühapäeviti küpseta-b Mari tavaliselt kooki* [on.Sundays bake-3SG Mari usually cake.PAR.SG] ‘On Sundays, Mary usually bakes cakes’

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## **Focus-marking in prosody and word order in Hungarian: No escape from syntax**

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Keywords: information structure, focus, prosodic structure, prosodic recursion, Hungarian

**Background.** According to a prominent approach to the interaction of syntax and information structure, non-canonical word orders in narrow focus sentences subserve prosodic requirements of focus. Non-canonical syntactic patterns are derived in order to keep to default prosody while meeting prosodic conditions on focus (PCF), such as the alignment of focus with nuclear prominence and/or with the edge of a prosodic constituent (Reinhart 1995, Szendrői 2003, Fanselow 2006). Canonical word order could only be used in principle if the relevant PCF can be met by resorting to marked, non-canonical prosody (e.g. by stress shift or boundary insertion). This ‘prosodic interface’ approach offers a theoretically elegant, restrictive account of focus word orders across a variety of languages.

**Argument.** An apparent asymmetry seems to exist, however, between two types of languages. In many languages, assigning non-canonical prosody to canonical word order is not impossible, but merely dispreferred, in a gradient fashion, to non-canonical ordering (for Dutch, see Neeleman & Reinhart 1998, for Spanish, see Calhoun et al 2018). In other languages, such as Hungarian, the use of non-canonical prosody seems to be categorically unavailable: satisfying PCF always involves syntactic reordering (Szendrői 2003). In this talk we bring novel experimental data from Hungarian to show that this cannot be treated as ordinary macro-parametric variation. Instead, we argue that the

difference is due to the fact that the relevant prosodic effects on word order are gradient, while purely syntactic requirements are categorical.

**Evidence.** While in the pre-verbal field the restriction on the position of focus is categorical (É. Kiss 2002, Szendrői 2003), our forced choice experimental study of word order (Exp.1, n=101) demonstrates that in the post-verbal field focus is positioned preferentially in an immediately post-verbal (IPV) position (81%, see Fig.1). In our production study (Exp 2, n=12), we show based on acoustic parameters indicative of prominence relations and prosodic structure, that while IPV focus is prosodically (mostly) unmarked, clause-final focus receives prosodic focus marking through non-canonical prosody (Table 1). In a ‘prosodic interface’ approach the results from both experiments are explained on the assumptions that:

(i) intonational phrases (IntP) can be recursively embedded (Selkirk 2011), due to phase-based cyclic mapping from syntax to prosodic representation (Ishihara 2007, Pak 2008, etc),

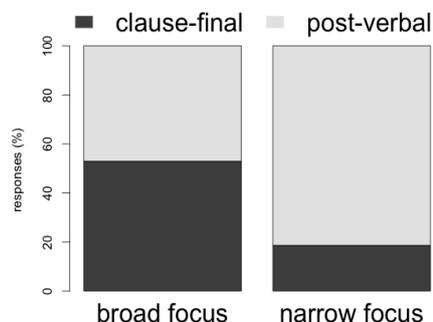
(ii) in Hungarian, focus must be aligned with the left edge of an IntP (Szendrői 2003, 2017), and

(iii) the main IntP, which corresponds to the comment part of the clause (a phasal domain), contains another IntP that includes the post-verbal region (a smaller phasal domain):

(1)  $(_{\text{IntP1}} \dots V (_{\text{IntP2}} XP YP))$

Since in an IPV position a focused phrase satisfies the prosodic requirement in (ii) in the default prosodic structure in (1), it preferentially appears there (=XP). If the focus is not placed in the IPV position (=YP), it needs to be marked by non-canonical prosody, a dispreferred option.

If so, then the obligatory verb-adjacent placement of *pre-verbal* focus in the same language cannot be a similar prosodic interface phenomenon, but must be governed by narrow- syntactic(alized) requirements.



**Figure 1.** Word order preferences for Focus placement

Focus	Accented Syllable				
	f0max	f0min	f0range	duration	intensity
post-verbal	✓			✓	
clause-final	✓	✓	✓	✓	✓
Focus	Preceding Boundary				
	f0max	duration	preceding pauses		
post-verbal					
clause-final	✓	✓		✓	

**Table 1.** Significant differences from Broad Focus baseline depending on Focus placement

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## Revisiting the architecture of Polar Questions (PQs) and their answers

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Keywords: Polar questions/answers, *truth/polarity* answering systems, Negation, Polarity.

The analysis of polar questions (PQs) and their corresponding response particles/answers (as those illustrated with the English examples in (1-3)), constitutes a research topic particularly suited to uncover the subtle interplay of the various components of grammar and the intricacies of the architecture of language.

- (1) Did Sue steal the cookies? (2) Did Sue *not* steal the cookies? (3) *Didn't* Sue steal the cookies?
- |                   |                    |                      |
|-------------------|--------------------|----------------------|
| a. Yes, she did   | a. Yes, she did.   | a. Yes, she did.     |
| b. No, she didn't | b. No, she didn't  | b. No, she didn't    |
|                   | c. Yes, she didn't | c. * Yes, she didn't |
|                   | d. No, she did.    | d. * No, she did     |

The variety of syntactic patterns, word orders and polar particles exhibited by PQs crosslinguistically and the impact they have on the interpretation of these interrogatives and their associated answers have led to very fruitful research on this question (see, among others, Krifka 2013, 20015, 2017, and Holmberg 2016). Recent work has also argued in favor of dedicated functional projections in the left periphery of PQs to account for the interface with pragmatics (Wiltshko 2017, a.o.), and detailed study on the prosodic properties of PQs and their answers has also evidenced that these properties play a fundamental role in their interpretation (a.o. Goodhue 2018).

Here I will focus on examples of the type illustrated in (1-2), and present the first results of a more ambitious project to investigate the linguistic architecture of PQs and their answers. In addition to English PQs, I will also discuss Basque and Spanish PQs, where answers to PQs license strings with more than one response particle, with well defined prosodic and morphological differences among them. My analysis builds on Wiltshko's neoperformative approach and Holmberg's (2016) analysis of PQS but, as will be shown, the resulting system differs substantially. More specifically, **i**) I pay particular attention to the different biases (epistemic vs. evidential) of the PQs (a.o. Domaneschi, Romero & Braun 2017, Goodhue 2018) and offer a new approach to the Polarity head. **ii**) As a result of this, I offer a direct derivation of the morphosyntax-pragmatic interface of the PQs under analysis and provide a homogeneous and coherent interpretation of negative features, where uninterpretable

negative features ([uNeg] features) and negative concord operations are dispensable, avoiding some problems that Holmberg explicitly mentions regarding his own analysis. Further, **iv**) I reinterpret the split between the so-called *truth/agreement* answering systems (characteristic of languages like Japanese, Thai, Navajo, or Kashmiri) vs. *polarity* answering systems (Swedish, Finnish, etc.): under the approach advocated here in languages with exhibit both types of answering systems, like English (Holmberg 2016), Spanish or Basque, *polarity* answering systems turn to be *agreement* answering systems, but at a higher level of the clausal spine. **v**) I also point to the relevance of gestural features in the interpretation of answers to some PQs. Finally, **vi**) I will briefly discuss how this system opens the way to an alternative approach to the typology of Foci.

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