

57th Annual Meeting of the *Societas Linguistica
Europaea*

Book of Abstracts



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Semantic maps as a tool in linguistic reconstruction

Stefan Dedio
(University of Zurich)

While the reconstruction of proto-forms, phoneme inventories, and morphology have been part and parcel of historical linguistics for centuries, the reconstruction of more abstract patterns like syntax has proved more complicated. Even for Indo-European, the language family that has probably received the most scholarly attention, the syntactic and morpho-syntactic structures posited for the proto-language are still controversial (for an overview of attempts and problems, see Keydana 2018). It seems that the more abstract structures become, the less useful the comparative method becomes for reconstruction.

Some recent advances have been made using methods borrowed from evolutionary biology. For example, Dunn et al. (2017) and Carling et al. (2021) have applied stochastic character mapping to reconstruct alignment patterns in Germanic and Indo-European, respectively. Using the same field for illustration, I propose an alternative route for reconstruction: semantic maps.

A decade ago, Wälchli et al. (2012), Cysouw (2014), and Hartmann, Haspelmath, and Cysouw (2014) have demonstrated the utility of quantitative semantic maps for cross-linguistic comparison, especially for alignment typology. The basic assumption of this method is that two concepts that are cross-linguistically encoded with the same means are semantically more similar to each other than two concepts that are not. If, for example, the agents of verbs meaning 'kill' usually receive the same flagging as the agents of verbs meaning 'beat', and patients of verbs meaning 'kill' receive different flagging in most languages, this tells us the role of 'killer' and the role of 'beater' are more similar to each other than they are to the role of 'killee'. With the cross-linguistic data provided by databases like Hartmann, Haspelmath, and Taylor 2013 or Say 2020, it is possible to calculate a semantic map of verbal arguments.

If we want to use this synchronically viable tool for reconstruction, we need the additional assumption that grammatical structures are more likely to influence each other the semantically closer they are. This means that it is more likely that the beater is more likely to take over a new flag from the killer than from the killee. Using both simulations and the Insular Celtic languages as a case study, I will argue that this approach with semantic maps can yield valuable insights into more abstract patterns of reconstructed stages and proto-languages.

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The diachrony of the causal-noncausal alternation in Latin: A usage-based perspective

Tim Ongenae
(Ghent University)

Keywords: anticausative, lability, Latin, mediopassive, reflexive

One of the most intriguing alternations from a cross- and intralinguistic perspective, is the causal-noncausal alternation, i.e., how languages express externally caused (CAUSAL) events (e.g., “John opens the door”) as opposed to spontaneously occurring (NONCAUSAL) events (e.g., “The door opens”). Throughout its long history, Latin had three strategies for anticausativization, i.e., the transformation of a causal situation, as in (1), into a noncausal situation. These strategies were (i) the mediopassive strategy with the morpheme on *-r* in (2), (ii) the reflexive strategy (the active voice and the reflexive pronoun) in (3), and (iii) the labile strategy (the unmarked active intransitive) in (4) (Feltenius 1977, Gianollo 2014, Cennamo et al. 2015, Pinkster 2015, Cennamo 2022, and Ongenae Forthcoming).

(1) *ne gulam aut gurgulionem rumpas*
that not throat:ACC.SG. or windpipe:ACC.SG. break:SBJ.PRS.2SG.ACT.
“That you do not break the throat or the windpipe.”
(CHIRON. 9)

(2) *rumpitur totum corpus.*
break:IND.PRS.3SG.MPASS. whole:NOM.SG. body:NOM.SG.
“The whole body breaks.”
(CHIRON. 514)

(3) *vitium (...) cum etiam ruperit se*
disease:NOM.SG. when yet break:IND.FUT.3SG.ACT. REFL.ACC.
“When the disease will have broken.”
(CHIRON. 384)

(4) *quae collectiones per se rumpunt*
which:NOM.PL. tumour:NOM.PL.by REFL.ACC. break:IND.PRS.3PL.ACT.
“Which tumours break by themselves.”
(CHIRON. 179)

This paper discusses how a usage-based approach contributes to a better understanding of how this alternation occurs in Latin. The current research is based on results from the *Library of Latin Texts*, a diachronic corpus of Latin texts ranging from the third century BC up until the sixth century AD. First, we discuss the diachrony of the form-frequency correspondence, i.e., how causalness degree (the ratio between causal and noncausal use of the verb), as introduced by Haspelmath et al. (2014) and Heidinger (2015), relates to the diachrony of anticausativization (the ratio between marked and unmarked anticausatives) in Latin. The earlier periods of Latin display a tendency to have anticausative marking (i.e., the mediopassive and reflexive strategies) for predicates in which the causal alternant is more frequent than the noncausal alternant and, *mutatis mutandis*, lability when the noncausal alternant is more frequent. This tendency, however, weakens over time as lability becomes more productive in later periods. Secondly, we discuss how the form-frequency correspondence can contribute to the well-known transitivity hypothesis, as introduced by Hopper and Thompson (1980). Since the anticausative alternation is originally explained through transitivity parameters (Gianollo

2014, Cennamo et al. 2015, Cennamo 2022 and Ongenae Forthcoming), we will demonstrate how the explanations by means of form-frequency and through transitivity parameters are complementary to one another. More transitive verbs, like achievements, are more likely to have a marked anticausative since they have a high causalness degree, while less transitive verbs, like activities and degree achievements, are more likely to display lability since they have a lower causalness degree. Consequently, the extension of lability to more transitive predicates in later periods goes hand in hand with the gradual weakening of the form-frequency correspondence in the choice of anticausative strategy. The results of this work will contribute to a more profound understanding of the mechanisms behind language change and the relevance of form-frequency correspondence to syntactic theory.

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Emergence of impersonal constructions in Ancient Greek: The role of split alignment

Diego Luinetti

(Università degli Studi Guglielmo Marconi)

Keywords: Impersonal constructions, Split alignment, Subject properties, Diachrony, Ancient Greek.

Impersonal constructions are a widespread phenomenon across the languages of the world, which only recently has been studied also from a diachronic point of view (Malchukov & Siewierska 2011). Our focus is on a particular type of impersonal construction found in Ancient Greek (Cuzzolin 2006), where a divalent verb lacks a Nominative-marked argument in its syntactic structure (*e.g.*, οἱ ἐπῆλθε παρ᾽εἶν τε καὶ βῆξαι Herod. 6, 107 ‘He happened to sneeze and cough’): the verbs allowing this impersonal construction are mainly of experiential meaning (on experiential verbs cf. *inter alia* Dahl 2014, Dahl & Fedriani 2012), and are sometimes referred to as displaying a non-canonical subject (cf. *inter alia* Aikhenvald & alii 2001, Barðdal & Eythorsson 2018, Haspelmath 2001, and Onishi 2001)

We investigate the path of emergence of such impersonal constructions throughout diachrony, from Homeric to Classical Greek, with the aim of showing how the split alignment (Cotticelli & Dahl 2022, Tsunoda 1981), involving neuter nouns and pronouns, promotes their formation. Our approach is based on the Role and Reference Grammar (Foley & Van Valin 1984, Van Valin 1993, Van Valin 2005, and Van Valin & LaPolla 1997).

We consider a sample of 16 verbs which have only a personal construction in Homeric Greek and acquire an impersonal construction in Classical Greek: we collect every 3rd person singular occurrence of each verb in Homeric Greek (*Iliad* and *Odyssey*) and in Classical Greek (in a *corpus* including Herodotus, Thucydides, Plato and Aristophanes), and we classify each occurrence according to semantic and morphosyntactic criteria. We then outline the path of loss of subject properties (Keenan 1976; Falk 2006; Seržant & Kulikov 2013) leading to the impersonal construction: when a neuter noun occurs as the first argument of a prototypical transitive construction, on the syntactic level, it instantiates a shift from accusative to neuter alignment, leading, first, to the neutralization of the morphological distinction between Nominative and Accusative, second, to the loss of agreement with the verb in the category of number; on the semantic level, the first argument loses the [+human] and the [+agentive] traits (*e.g.*, μιν [...] ἐπήλυθε νήδυμος ὕπνος Hom. Od. 4, 793 ‘sweet sleep took her’). Then, when neuter personal pronoun occur as the first argument, there is also a loss of referentiality (*e.g.*, ἡμῖν οὖν εἰσῆλθέ τι τοιοῦτον Plato, *Theaet.* 147d ‘something like this occurred to us’). The construction is thus open to allow a noun clause to occur in the place of the neuter pronoun, with the complete loss of all noun category markers (*e.g.*, οἱ ἐπῆλθε παρ᾽εἶν τε καὶ βῆξαι Herod. 6, 107 ‘He happened to sneeze and cough’). The statistic distribution of the occurrences shows, first, that impersonal constructions are almost unattested in Homeric Greek, while they increase significantly in Classical Greek; secondly, we can notice how the path of development of impersonal constructions has already started, to some extent, in Homeric Greek.

We can thus verify the following claims: the emergence of impersonal constructions is triggered by the instantiation of neuter alignment by neuter nouns, which opens a path of loss of subject properties; the syntactic change is paralleled by a semantic change within the argument structure of the verb; Ancient Greek impersonal constructions are mostly a later development, but the conditions for their emergence are already present in the Homeric phase.

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Clitic doubling in Lycian?

Daniel Petit
(Ecole Normale Supérieure of Paris)

Lycian belongs to the minor Anatolian languages spoken in south-western Anatolia in the first millennium BCE; it is documented through 150 inscriptions in a Greek-derived alphabet. Linguistic typology does not attach much importance to fragmentary languages like Lycian, but it can happen that Lycian makes a decisive contribution to central issues of linguistic typology, to the same degree as modern or better-documented languages. Garrett (1992) has drawn attention to a syntactic structure peculiar to Lycian:

<i>Ebēññē</i>	<i>prñnawā</i>	<i>m=ē=ti</i>	<i>prñnawatē Xisterija</i>
DEM.ACC.SG	building.ACC.SG	PCL=it.ACC.SG=PCL	build.PST.3.SG Xisterija.NOM.SG
'This building, Xisterija built it'			

The object is topicalized (*ebēññē prñnawā* 'this building') and repeated by a clitic pronoun (=ē= 'it'). The typology of clitic doubling leads us to distinguish three situations: (1) a topicalized object is not repeated by a pronoun (e.g. Ancient Greek); (2) a topicalized object is repeated by a pronoun (e.g. Lycian or English); (3) an object, whether topicalized or non-topicalized, is doubled by a pronoun (e.g. the Balkan languages). Closer analysis shows that these various configurations share a definiteness constraint on the topicalized object. Lycian confirms the validity of this constraint, but shows that, contrary to Bošković's (2008) generalization, clitic doubling is not limited to languages with definite articles. A comparison with the Balkan languages (Kallulli & Tasmowski 2008, Friedman 2008), where clitic doubling has spread outside of topicalizing contexts, invalidates Kayne's (1975) generalization (cf. also Jaeggli 1982) that clitic doubling is possible only in languages with clear case assignment, which does not work for Bulgarian. The position of Lycian in this respect is interesting: it remains a non-configurational language of the ancient Indo-European type (Luraghi 2010), but, on the other hand, it is the first Indo-European language to have adopted clitic doubling.

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Metaphors, preverbs, and diachrony: Motion verbs in Ancient Greek and Latin

Andrea Farina
(King's College London)

Keywords: Ancient Greek and Latin, Metaphors, Preverbs, Motion verbs, Diachrony

Metaphors extend our conceptualization of reality and are part of our everyday life (Lakoff and Turner 1989). In cognitive linguistics terms, metaphors associate a concrete (source) to an abstract (target) domain (Lakoff and Johnson 1980; Kövecses 2002). Compared to nouns, verbs are more likely to possess metaphorical meanings (Jamrozik et al. 2013; Krennmayr 2011; King and Gentner 2021). Within the category of verbs, motion verbs have garnered considerable scholarly attention, in modern (e.g. Wilkins and Hill 1995) and historical languages (e.g. Bartolotta 2017), from both diachronic and comparative perspectives (Stolova 2015; Bartolotta 2018). As motion is inherently associated with everyday experiences (Lakoff and Johnson 1980), motion verbs tend to possess many metaphorical meanings. Metaphorical meanings of motion verbs have been considered in English (Lakoff 1979; Torreano 1997; Sandström 2016; Wang 2021) and in historical (Georgakopoulos et al. 2016) and comparative linguistics (Özçalışkan 2002, 2005; Ponterotto 2014).

Morphologically, preverbs constitute an interesting category and have widely been studied in linguistics (Booij and Van Kemenade 2003), also in a diachronic perspective (e.g. Haverling 2003; Papke 2010; Manolessou and Ralli 2015; Zanchi 2017, 2019). A few studies are specifically devoted to the semantics of preverbed motion verbs in historical languages (Serrano Ruiz 2015; Farina 2021; see also Nuti 2016). Even though some of them also consider metaphorical meanings, no comparative study has yet focused on metaphorical motion in historical languages.

This talk presents a quantitative diachronic study on Ancient Greek and Latin preverbs and preverbed motion verbs, with a focus on metaphorical meanings. For each language, I consider 16 preverbs (e.g. AGr. *apo-*, Lat. *ab-* 'away'; AGr. *en-*, Lat. *in-* 'in'; AGr. *hupo-*, Lat. *sub-* 'under') and eight motion verbs connected to different motion domains (e.g. AGr. *eîmi*, Lat. *eo* 'go'; AGr. *pléō*, Lat. *navigo* 'sail'; AGr. *pétomai*, Lat. *volo* 'fly'), for a total amount of 256 verbs. Overall, the corpus has more than 540,000 tokens and includes 16 Greek and 13 Roman authors, from Early Greek (6th century BCE) and Latin (3rd century BCE) to the 2nd century CE, encompassing six literary macro-genres (poetry, historiography, theatre, oratory, philosophy, novel). Verbs are manually annotated on different linguistic parameters, including (non-)literal senses, using annotation guidelines on preverbed motion verbs (Farina forth. 2024). I will try to answer to the following research questions: (i) do Ancient Greek and Latin preverbs differ with respect to the number of non-literal meanings that preverbed motion verbs can acquire in these languages?, and (ii) in which way do Latin and Ancient Greek preverbs semantically correspond when referring to metaphorical meanings of motion verbs?

Understanding how preverbed motion verbs acquire metaphorical meanings over time can contribute to broader discussions on preverbs, semantic change, and metaphorical processes in language. Moreover, from a cognitive linguistics perspective, by comparing Ancient Greek and Latin the results of this study will cast new light on how speakers of Ancient Greek and Latin conceptualized motion and related actions. The analysis of metaphorical expressions could reveal underlying cognitive processes and cultural conceptualizations of motion events.

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Resultative constructions, intransitivity and pluractionality: The case of the future perfect in Ancient Greek

Giulia Greco
(University of Pisa)

Keywords: Ancient Greek-future tense-modality-pluractionality-resultative constructions

This paper addresses the question of the origin and functions of the future perfect in Ancient Greek. In particular, the connection between the future perfect, the perfect paradigm, the reduplication and the selection of middle voice is investigated (Brugmann 1916, Wackernagel 1928, Giannakis 1997, and Willi 2018). The derivation of the future perfect from the perfect and its resultative function are extensively discussed and not all authors agree on the perfective origin of the future perfect. Some authors (Magnien 1912, and Chantraine 1942) suggest that the future perfect derives from the old desiderative category. According to this origin, the future perfect encodes desiderative values and has no difference in meaning with the non-reduplicated future.

Regarding the selection of middle voice, in Ancient Greek the future perfect selects only middle voice. The only active forms are *èichō* (I will appear), *hestéchō* (I will stay) and *tethnéchō* (I will die) (cf. Cakot 1911). This is an interesting fact because in the other tenses the unmarked voice is usually the active voice. So, this study tests the hypothesis that the properties of the verbs that show a future perfect (Romagno 2002, 2005, 2010, 2021) and the intransitive nature of this formation (Orlandini/Pocchetti 2017) play a crucial role in the selection of middle voice.

Finally, this study analyses the reduplication in the future perfect with particular focus on the pluractional functions of this morpheme (Cusic 1981, Magni 2017, and Lazzeroni/Magni 2018). Regarding the main issues of this formation, the verbs that show a future perfect are examined both on formal and functional grounds. Therefore, the stems and reduplicated types of this formation are investigated. Then, the contexts of occurrence of these verbs are investigated with particular attention to the phrase and the adverbials that combine with this category. Narratological context is considered too. Finally, the future perfect is compared to the sigmatic future to determine the possible differences between these two categories. The corpus of this study consists of the future perfects that are attested from Homer to the Hellenistic era (Gehring 1970, and TLG).

The results of this study show that: 1) the stems of the future perfect (e.g., *bebrōsetai* 'he will be devoured'-*bebrōthois* 'you devour') point out that this category derives from the new resultative perfect paradigm (Niepokuj 1997, and Drinka 2003); 2) the resultative functions of the future perfect point out this origin too (e.g., *pephēseai* 'you will be killed' in *Od.* 22,17); 3) this resultative function of the future perfect can develop in the meaning of the current relevance (e.g., *eirēsētai* in *Il.* 23,795), in the meaning of the past in the future (e.g., *hēirēsētai* in *Plato Prot.* 338c 1) and in the evidential meaning (e.g., *proskeklēsesthai* in *Aristophanes Cl.* 1277); 4) in this category the selection of middle voice encodes morpho-syntactically the intransitive nature of resultative constructions (cf. Nedjalkov/Jaxontov 1983); 5) in the future perfect, reduplication is semi-grammaticalized and can encode only the event-external pluractionality.

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Linguistic and dialectal characterisation of Ancient Greek personal names in Rhodes

Jeremy Pacheco Ascuy
(University of Salamanca)

The systematic study of personal names as a linguistic category has often been overlooked in descriptive studies, particularly in dialectal grammars and descriptions, which heavily rely on the data provided by common lexical items, relegating onomastic evidence to a marginal role, given that personal names usually retain archaisms and may not represent the reality of the language. Nevertheless, personal names have gained increasing recognition as significant evidence for the study of the ancient Greek dialects (cf. Morpurgo Davies 2000; Striano Corrochano 2014; Alonso Déniz *et al.* 2017; Minon *et al.* 2023; Nieto Izquierdo (*forthcoming*) among others).

Beyond the overarching dialectal features that affect personal names like any other linguistic element, specific linguistic phenomena occur almost exclusively in the onomastic domain and are confined to particular geographical areas. These phenomena encompass:

- (1) The utilization of certain suffixes (cf. Boeotian *-ōndas*; del Barrio Vega 2017).
- (2) The creation of new stems and/or the use of unexpected thematic vowels in compound names (cf. Rhodian *Polema^o* ~ rest of the dialects *Polemo^o* < *pólemos* 'war').
- (3) Phonological processes (cf. the heterophonemic contraction in the feminine ending *-ē* < *-ea* < *-eia*, as in Rhodian *Hagesiródē* < **Hagesiródeia*).

Ancient Rhodes, one of the largest and most relevant islands in the eastern Mediterranean, provides an outstanding testing ground for the study of dialectal characterisation of personal names and the repercussions of linguistic contacts. Its rich epigraphic corpus allows for a solid knowledge of its dialect and provides us with a massive dataset of 12 500+ personal names. Thanks to its privileged position off the coast of Asia Minor (modern Türkiye) and not far from other islands of the Aegean Sea, population movements and cultural contacts were very frequent in the area during Antiquity, mainly between speakers of different varieties of Ancient Greek. As a result of this long-lasting contact, non-Rhodian names enter the local onomastic stock via infiltration, as well as some external linguistic features later found in Rhodian personal names.

The aim of this paper is to present salient linguistic traits characterizing the personal names of Ancient Rhodes, with a prominent focus on those who affect personal names exclusively or are found only in the onomastic evidence. Moreover, this analysis will delve into the interaction of dialect and personal onomastics as valuable evidence. Finally, part of the analysis will be devoted to the study of linguistic contacts and their reflexes in personal names and onomastic traditions.

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On distinguishing between translation effects, contact-induced change and native syntax: Partial agreement and VSO in the Greek Septuagint and the diachrony of Greek

Nikolaos Lavidas
(National and Kapodistrian University of Athens)

Three main remarks of earlier studies form the starting point of the present study on partial agreement and the V(erb)S(ubject)O(object) order in the text of the Greek Septuagint: (i) VSO in Greek changed from a marked word order of Classical Greek to an unmarked order of the Biblical Greek subtype of Koiné Greek – for instance, in the case of the New Testament (among others, Kirk 2012) – to become an unmarked order of Modern Greek; (ii) VSO is the basic word order for the Biblical Hebrew source text/Vorlage of many parts of the Septuagint, and partial agreement (agreement with one of the postverbal conjoined subjects; see Ex. 1) is a characteristic of both Biblical Hebrew and the text of the Septuagint; (iii) Previous syntactic analyses of partial agreement with postverbal subjects have related full and partial agreement to the (non)movement of the subject to Spec, TP and particular word orders (among others, Doron 2000). Accordingly, the main question that arises is whether word orders and partial agreement as attested in the Greek Septuagint (a) represent a biblical translation effect, that is a style-related feature of biblical translations (cf., among others, Heine 2008; Taylor 2008; Gianollo 2011), or (b) are a part of the native syntax of Koiné Greek but strongly influenced by language contact with Semitic languages, or (c) reflect some internal resetting in the clausal structure of Greek.

- (1) *kai* *êren* *dauid* *kai* *hoi* *ándres*
and lifted-up.3SG David.NOM.SG and ART.NOM.PL man.NOM.PL
autoû *tên* *phōnên* *autôn*
3SG.GEN.M ART.ACC voice.ACC 3PL.GEN.M
'Then David and the people that were with him lifted up their voice' (Greek Septuagint; 1 Kings 30:4)

We compare the data on VSO and partial agreement in the Greek Septuagint with data from other biblical and non-biblical Koiné Greek texts and with data from other earlier texts. We argue that VSO is available as a result of different derivations in the diachrony of Greek. Moreover, Classical Greek shows examples of partial agreement even though Classical Greek is not a language with VSO neutral clauses (cf. also Johnson 2014). Partial agreement is also possible with both pre- and postverbal subjects in the New Testament and non-biblical texts of Koiné Greek. However, Koiné Greek presents a clear preference for postverbal subjects with partial agreement and preverbal subjects with full agreement.

We propose a correlation between the characteristics of VSO and partial agreement in the Greek Septuagint and a syntactic change in the T domain, evidenced not only in translations and Biblical Greek. In addition, the data from the Septuagint indicate that, in the case of VSO in the Greek of the Septuagint (and other texts of Koiné Greek), the Semitic influence led to the pragmatic unmarking of a word order but not to the emergence or loss of a word order.

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Articles in Northern New Caledonian

Jean Rohleder
(University of Bern)

Articles can be reconstructed for Proto-Oceanic (Lynch, Ross, and Crowley 2002 : 38), but their development in New Caledonian has not yet been studied in detail. As is typical of Melanesia, language contact led to rich and diverse sets of articles, where cognate forms were re-interpreted, borrowed, or compounded to express unique functions.

Which functions are inherited, which were innovated? How did these innovations influence each other across languages?

In the (Central) Northern New Caledonian branch, articles have come to include gender, in the case of Cèmuhî (Rivierre 1980) and Paicî (Rivierre 1983), and as-of-yet under- described functions tied to information structure. In eastern Nemi, for example, an anaphoric and present set are distinguished, which is unique for the area (Table 1).

	DEF		IDF
	SPEC & Present	ANA	
SG	<i>vi, veli</i>	<i>ven</i>	<i>vera; va</i> (IRR)
DU	<i>maali</i>	<i>maan</i>	<i>maara</i>
PL	<i>ngeli</i>	<i>ngen</i>	<i>ngera</i>
Partitive	<i>ra</i>		

Table 1: Articles in Eastern Nemi (Ozanne-Rivierre 1979 : 30)

This talk will present data of the subfamily both from existing descriptions and fieldwork, with a focus on Nemi, Paicî, and Vamale. We will first show cognate forms and compare their functions to show that three grammatical categories are shared across the North: specificity, number, and definiteness. Moving on from this historical basis, we will present the development of complex forms in the three languages, as well as the functional expansion of the article sets to include e.g. gender and subtle distinctions tied to information structure.

For example, Paicî uses an old form *pa* found across the subgroup for the innovated feminine gender, and a new form for all other specific nouns, composed of the old form and the prefix *te-*. In Cèmuhî as well, the feminine article is the inherited form, and the masculine is compounded, but with a suffix.

Comparing innovations across Northern languages suggests that they developed their article sets in contact with others, as the region was historically shaped by multilingualism. Some articles in the North express similar functions through unique forms, and others were borrowed to signify unique functions. Whether forms were borrowed or not, all Northern languages also enriched their article sets through compounding of existing forms.

The talk is a contribution to understanding how language change and diversification in Northern New Caledonia is shaped through contact. It argues that a history of contact can be reconstructed through areal typology. Finally, it calls for more small-scaled descriptions, as language varieties are more influenced by spatial proximity than genealogical ties.

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When does semantic change lead to semantic loss? Metaphor vs inference-driven metonymy

Hilke Ceuppens & Hendrik De Smet
(KU Leuven & KU Leuven)

Keywords: semantic loss, polysemy, semantic change, metaphor, inference-driven metonymy

Semantic change proceeds via an A > A/B (> B) trajectory (Traugott & Dasher 2002). Older source senses extend and come to exist alongside newer meanings, leading to a stage of polysemy. In a possible second step, the original sense is sometimes lost, although often it is not. While much is known about the mechanisms underlying semantic extension, the reverse side of the process, semantic loss, is still poorly understood. The literature suggests a variety of possible factors, such as competition (e.g. Nuyts & Byloo 2015) and bleaching (Bybee 2003). This presentation explores a different avenue, hypothesizing that inference-driven metonymic extension poses a graver threat to the source sense than metaphorical extension. Metaphorical extensions (e.g. *dim* 'dark' > 'unintelligent') typically give rise to radically new usage contexts, meaning there is no contextual overlap between the older meaning and its extension. Inference-driven metonymic extensions (e.g. *silly* 'virtuous, innocent' > 'foolish') on the other hand, are used in highly similar contexts to the original sense, resulting in competition between old and new senses and the potential loss of the old sense.

This hypothesis is tested on a principled sample of English adjectives expressing human emotions and character traits (a semantic domain where both types of extension commonly occur). First, a sample is composed of 100 adjectives, collected by entering seed items in *Merriam-Webster's Thesaurus* and identifying semantically related words, with a focus on (synchronically) non-derived forms. Next, adjectives are sorted based on the extension mechanism that gave rise to their emotion/character trait sense, and the occurrence of loss of the source sense, as follows:

- The distinction between metaphor and inference-driven metonymy is based on two different notions, namely domain and bridging contexts. Metaphors are characterized by a shift in domain, whereas metonymy involves a domain-internal shift based on inferencing from bridging contexts.
- Loss can be established by consulting and comparing dictionary entries in *Merriam Webster's* and the *Oxford English Dictionary*: senses qualify as lost if they are marked as *obsolete*, *archaic*, etc., or are missing in *Merriam Webster's*.

Accordingly, four different categories are established, as in Table 1. Finally, the prevalence of loss is compared across the categories of metaphorical and metonymic extension.

	Metaphor	Metonymy
Loss of source sense	<i>Glad</i> : † 'bright' > 'delighted'	<i>Silly</i> : † 'virtuous, innocent' > 'foolish'
Retention of source sense	<i>Dim</i> : 'somewhat dark' > 'stupid'	<i>Mean</i> : 'of low rank, insignificant' > 'unkind, cruel'

Preliminary results indicate loss is indeed more likely following inference-driven extensions than following metaphorical extensions. This finding contributes to a better understanding of loss, and is relevant to semantic change in general. For example, it helps understand why grammaticalization, where inference-driven metonymy is the main extension mechanism (Traugott 1989), often involves semantic loss.

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Negative correlative coordination in Indo-European: Emergence, evolution and variability

Iker Salaberri

(University of the Basque Country; UPV/EHU)

Keywords: negation, clause linkage, Indo-European, reconstruction, cyclic change

Recent years have witnessed an increased interest in the semantic and morphosyntactic properties of simultaneously coordinating and negating conjunctions, such as English *neither* and *nor*, French *non plus*, German *genauso*, *ebenso* (*wenig*) (*wie*), etc. Some points of discussion include: whether these elements express focus (Johannessen 2005), whether they are always correlative, or at least anaphoric (Gianollo 2018: 234–235), whether emphasis can be regarded as a defining feature (Haspelmath 2007: 17–19) and, in general, how to delimit them *vis-à-vis* formally and functionally similar elements such as additives, adverbs, and scalar focus particles (Payne 1985, Van der Auwera 2021).

Relevant insights into these questions can be gained by looking at simultaneously coordinating and negating conjunctions diachronically. In this respect, a number of papers tackle the topic in some Indo-European languages: Erschler & Volk (2011) on Ossetic, Gajić (2018) on Croatian, Briceño Villalobos (2020) on Old Persian, Mosegaard Hansen (2021) on French, Van der Auwera et al (2021) on Balto-Slavic, Van der Auwera & Koohkan (2022) on Modern Persian. However, there is to date no Indo-European-wide study on the emergence and evolution of this kind of elements.

In view of the former, this paper looks at a subtype of negating and coordinating strategy, namely negative correlative coordination (NCC) constructions. These constructions consist of correlative conjunctions plus their coordinands, cf. 1a–b.

- (1) a. *Ani wčera ani džensa jeho*
NCC.MARKER yesterday NCC.MARKER today 3SG.ACC
widža-ŧ nje-jsym
see-3SG.M.PST NEG-AUX.PRS.1SG
'I saw him neither yesterday nor today'
(Schuster-Šewc 1996: 230)
- (Upper Sorbian)
- b. (*Nate*) *k^ha-b=e* *klr-ec-it*
NCC.MARKER eat-INF=EMPH do-PRS-2SG
nate k^ha-b=e d-ec-it
NCC.MARKER eat-INF=EMPH let-PRS-2SG
'Neither will you eat, nor will you let (anyone else) eat'
(Wilde 2008: 341)
- (Rajbanshi)

This clause linkage strategy is analyzed in a sample of 240 historical and present-day doculects. The data, which are drawn from reference grammars and dedicated publications, are analyzed

using Cramer's V (1946) and Theil's U (Theil 1966) statistical tests in order to search for correlations between four variables: (i) etymology of NCC markers; (ii) syntactic complexity of coordinands; (iii) the extent to which NCC markers are accompanied by reinforcing elements; (iv) number of NCC strategies in each language. The findings are used to trace the diachronic evolution of NCC constructions and form a typologically informed hypothesis concerning how these constructions originated in the proto-language.

The results indicate that NCC constructions emerged in Proto-Indo-European by analogy with positive correlative conjunctions like Latin *A-que B-que*. The relationship between positive and negative correlative conjunctions is argued to relate with the fact that both have an exhaustive reading and are used to convey contrastive focus. Like all focus markers, positive and negative correlative constructions constitute a system of question and response. Furthermore, a cyclic change is identified whereby NCC markers bleach through frequent use and are regularly reinforced and renovated. A number of paths of renewal are pinpointed, which are used to explain the variation of NCC constructions across Indo-European.

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GS Syntax

Bleating, growling, barking, and spitting: Exploring metaphorical extensions and valency patterns in verbs of speaking

Branimir Belaj, Ivana Brač & Kristina Štrkalj Despot
(Faculty of Humanities and Social Science, University of Osijek / Institute for the Croatian Language /
Institute for the Croatian Language)

Keywords: verbs of speaking, metaphor, metonymy, valency patterns, Croatian

In this presentation, we will discuss metaphorical and metonymic transfers of verbs' meanings within the domain of speaking and their valency patterns in Croatian. The analysis will be carried out within the framework of cognitive linguistics, i.e. usage-based model (cf. Langacker 1987, 1988, 2000, 2008, Barlow & Kemmer 2000, Bybee & Hopper 2001), conceptual metaphor theory (Lakoff & Johnson 1980) and constructional approaches to grammar, primarily Cognitive Grammar (Langacker 1987, 1991, 2008, Rice 1987), and partially Construction Grammar (Goldberg 1995).

Even though general verbs of speaking (VoS) (e.g., *reći* 'say', *kazati* 'tell', *govoriti* 'speak') are among the most frequent verbs, verbs belonging to various semantic frames are often used as VoS in order to express different (mostly negative) attitudes towards the speaker or the message. For instance, verbs of sounds made by animals are used as VoS, leading to metaphorical mapping from the animal to the human world, with the speaker's intention to describe the one's voice or thoughts as unpleasant or unintelligent (e.g., *blejati* 'bleat'). This can further extend down the great chain of being (Lakoff & Turner 2009) when verbs of sound emission, such as *otkucati* in *Sat je otkucao ponoć*. 'The clock struck midnight' can be used with a human agent *Otkucao ga je policiji*. 'He ratted him out to the police.' Expressing an extremely negative attitude towards the speaker's words involves the use of verbs associated with physiological processes (e.g., *srati* 'shit', *pljuvati* 'spit'). It is also interesting to investigate verbs' valency patterns within both the source and target domains. For example, verbs of sound made by animals are primarily intransitive (1), but when they are used in VoS-constructions, they change their valency patterns, adopting the valency patterns of other VoS (2).

(1) *Svinja je roktala oko ograde.*
pig.NOM.SG was grunting around fence.GEN.SG
'The pig was grunting around the fence.'

(2) *pa je opet počeo roktati o nekim predsjednicima.*
then AUX again started grunting about some.LOC.PL president.LOC.PL
'... and then he started grunting again about some presidents.'

However, some verbs can bring new valency patterns to the class of VoS. For example, the prepositional phrase *po* 'on' + locative from the class of verbs associated with physiological processes (3) to VoS (4).

- (3) *Budi se, budalo, sereš po krevetu.*
 wake_up REFL fool.VOC.SG shit on bed.LOC.SG
 ‘Wake up, fool, you are shitting on the bed.’
- (4) *sereš po drugima a radiš isto ono po čemu pljuješ*
 shit on other.LOC.PL and do same that on what.DAT spit
 ‘you shit on others, yet you do the same thing that you spit on.’

For this study, we compiled a list of 154 verbs and classified them based on their source domain (breathing, crying, sounds made by animals, sound emission, throwing, etc.). All verbs are accompanied by examples from Croatian corpora (mainly *Croatian Web Corpus* – hrWaC, Ljubešić & Klubička 2014, *Hrvatska jezična riznica*, Brozović Rončević & Čavar 2008, and *Croatian national corpus* – HNK, Tadić 2009) which are manually annotated in order to determine their valency patterns. This presentation aims to address the following research questions: 1. What source domains are used for VoS?, 2. Do verbs inherit valency patterns from the source domain or adopt new ones from the target domain, 3. When a primarily intransitive verb is employed with an object, is passivization possible, and what does that indicate about the object’s status?

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The diachronic journey of the Spanish Absolute Construction along the Communicative Continuum: A case of clause linkage

Marie Molenaers & Bert Cornillie
(KU Leuven & KU Leuven)

Keywords: absolute construction, clause linkage, syntax, semantics, Communicative Continuum

This paper determines the syntactic and semantic features that led to the entrenchment of the Spanish AC. It evolved from a highly formal 15th-century Latin calque (1: *después de las çibdades pobladas* ‘after the cities have been settled’) to a more versatile 18th-century absolute (2: *estas temiéndose la última maldad* ‘these fearing the ultimate evil’), transcending the extremes of Communicative Distance (Koch & Oesterreicher 1990 [2011]). The analysed corpus comprises Latin source texts and their corresponding preclassical and modern Spanish translations from the 15th to the 18th century.

- (1) *después de las çibdades pobladas, ¿quién podiera*
after.PREP the.F.PL city.F.PL settle.PST.PTCP.F.PL who.M.SG can.SBJ.IPFV.3SG
atraher los omnes [...]? (Cartagena, *La Retórica de Tulio*, 1421/1433)
engage.INF.PRS the.M.PL man.M.PL
‘after the cities have been settled, who could engage men [...]?’f
- (2) *Solo han quedado en pie hoy*
only.ADV have.IND.PRS.3PL leave.PST.PTCP.M.SG in.PREP upright.M.SG today.ADV
las paredes de Roma y estas temiéndose la
the.F.PL wall.F.PL of.PREP Rome.F.SG and.CNJ this.F.PL fear.GER=self the.F.SG
última maldad. (Valbuena, *Los Oficios*, 1777)
last.F.SG evil.F.SG
‘Only the walls of Rome have been left standing today and these fearing the ultimate evil.’

Previous research on the AC's elaboration process has focused solely on the syntactic shift from the past participle (1: *pobladas* ‘settled’) to the gerund (2: *temiéndose* ‘fearing’) (Del Rey Quesada 2019, 2021; Molenaers 2023). The bidimensional clause linking theory of Raible (1992/2001) has not yet been applied to the AC (Pons Rodríguez 2008; Kabatek, Obrist & Vincis 2010; Cornillie & Rosemeyer 2023). The current investigation employs this syntactic-semantic framework to demonstrate that factors beyond the changing predicate influenced the AC's moderate progression towards Communicative Immediacy.

By considering each absolute as a clause linkage device, I identified three parameters that indicate less formal Spanish ACs, including non-augmentation (the absence of an initial preposition or subordinate conjunction), a non-adverbial relation, and discourse or main clause coreference (semantic overlap of the AC's subject). The results of the regression analysis confirm a positive correlation between the gerundial AC (80% of all ACs in the 18th century) and the three variables (2) ($r=0.962$, $r=0.983$, $r=0.981$, respectively). However, the parameters do not correlate in the case of past participial ACs, which remain tied to augmentation, adverbial semantics, and non-coreference (1).

Two language-internal developments are involved in the evolution towards a syntactically less dense (non-augmentation: 58% to 80%) and semantically less complex (non-adverbial: 8% to 41%, coreferential: 25% to 61%) gerundial AC. The case switch from ablative to nominative in the transition from Latin to Spanish and priming with the less formal gerundial free adjunct facilitated the AC's movement away from the extremes of Communicative Distance.

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Dual in Numeral Constructions

Aleksey Starchenko & Michael Daniel
(HSE University & HSE University)

Keywords: dual number, plural number, numerals, numeral constructions, typology of number

The present study focuses on the use of nominal number marking in constructions involving a noun and the numeral ‘two’ in languages with the dual number.

Number marking in constructions involving a noun and a cardinal numeral (henceforth, numeral constructions) has attracted a lot of attention in recent years. One can find both large-sample typological studies on the topic (Matasović 2019; Nogina 2020) and its intense discussions in formal frameworks (Ionin & Matushansky 2006, 2018; Alexiadou 2019; Martí 2020a, 2020b; Caha 2021).

Most of these studies focus on the singular—plural distinction or take into account all kinds of plurality, dealing with dual and plural jointly. The few exceptions are Martí (2020a), which analyzes only four languages, or the studies focusing on one language, e. g. Sidorova (2016) for Northern Khanty or Gusev and Wagner-Nagy (2022) for Nganasan.

The aim of this study is to fill this gap. The research is based on a genealogically and areally balanced sample of 34 languages that feature nominal dual, with data coming primarily from descriptive grammars.

In the sample we find three strategies of how nouns in the numeral construction can be marked: dual (1), unmarked (2) or plural (3).

KORYAK < CHUKOTKO-KAMCHATKAN

- (1) *ŋəččeq kəminə-t*
two son-ABS.DU
‘two sons’

(Zhukova, 1972, p. 193)

TEHUELICHE < CHONAN

- (2) *xə:one ka:rken*
two woman
‘two women’

(Fernández, 1998, p. 243)

KUNAMA (ISOLATE)

- (3) *arkuba-y bārè*
camel-PL two
‘two camels’

(Idris, 1987, p. 53)

While a language may employ one of the three strategies consistently, a part of the sample allows for variation (Fig., Table). In some cases, language descriptions provide conditions of this variation (or they can be concluded from the text sources), e.g. animacy of the noun or discourse flow. In the talk we will present a more detailed description of these conditions.

We further test the observations made for numeral constructions in previous studies that do not treat languages with the dual separately. Nogina (2020) notices the correlation of marking strategies in numeral constructions with the obligatoriness of number marking outside numeral constructions. Matasović (2019) demonstrates the tendency for the unmarked strategy in languages without number

agreement in NP and the vice versa. Our data confirms that these generalizations hold for constructions with ‘two’, as well.



Fig. Number marking strategies in numeral constructions with ‘two’

Table. Number marking patterns in constructions with ‘two’

Relation	Strategies	Number of languages	Total
consistent	dual	12	19
	unmarked	5	
	plural	1	
	other strategies (non-plural)	1	
conditioned	dual & unmarked	12	14
	dual & plural	2	
No information		1	1
Total		34	

On the other hand, we show that our sample significantly differs with respect to the distribution of marking patterns compared to the sample of languages with no control for dual (both Matasović [2019] and Nogina [2020]). Languages with the dual exhibit a stronger tendency for the noun phrase to show number marking in numeral constructions, while languages without dual (but featuring number) use the unmarked strategy more often.

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Morphological feature mismatches in stripping-like constructions in Romanian: An experimental perspective on gender variability

Gabriela Bîlbîie
(University of Bucharest & LLF)

Keywords: gender mismatch, stripping, ellipsis, Romanian, experimental perspective

Mismatch effects in elliptical constructions provide an important testing ground for investigating the identity condition claimed to hold between the antecedent and the unpronounced material. We focus on gender mismatch in Romanian stripping-like constructions, with adjectival (ADJ) and nominal (N) predicates in negative stripping ('X is ADJ/N, but not Y', cf. (1a)) and negative pseudostripping ('X is ADJ/N, but Y no', cf. (1b)), where Romanian displays the homophonous negative form *nu* 'not/no' (constituent negation vs. proform negation).

- (1) a. Ionel este {curajos/medic}, dar **nu** și sora lui. b. Ionel este {curajos/medic}, dar sora lui **nu**.
'Ionel is {brave/a doctor}, but not his sister.' 'Ionel is {brave/a doctor}, but his sister no.'

In a theoretical study on gender mismatches in Greek predicate ellipsis, Merchant (2014) concludes that, when gender is variable (e.g. on adjectives), it may be ignored under ellipsis; on the other hand, when gender is invariant (e.g. on nobility/titles or kinship nouns), it may not be ignored under ellipsis. What follows from this is that inflectional morphology, unlike derivational morphology, is irrelevant for ellipsis computation. In an experimental study on Spanish adjectival predicates, Aparicio et al. (2015) conclude, based on two eye-tracking experiments, that ellipsis resolution is sensitive to morphological feature identity: there is a processing penalty associated with morphological mismatch, mismatched sentences are judged less acceptable than the matched ones, and, in addition, there is a gender asymmetry involved, the ordering Fem>Masc being judged less acceptable than Masc>Fem in mismatching environments.

The present study addresses the following research questions: Is there a penalty for gender mismatch across constructions (i.e. between pseudostripping and stripping) and across categories (i.e. between adjectives and nouns)? In the mismatched cases, does the gender ordering play a role? Concerning the first research question, we expect a penalty for gender mismatch across constructions (cf. Aparicio et al. 2015), at least for the stripping construction, which displays the behaviour of 'surface anaphora', unlike the pseudostripping construction, which behaves rather as 'deep anaphora'. As usually assumed (Hankamer & Sag 1976), surface anaphora are more sensitive to the form of their antecedents than deep anaphora. Moreover, we also expect a penalty for gender mismatch across categories (cf. Merchant 2014), as gender suffixes on adjectives and nouns do not share the same morphological pattern (inflectional vs. derivational, cf. Dobrovie-Sorin & Giurgea 2013). Concerning the second research question, we expect a penalty for the ordering Fem>Masc (cf. Aparicio et al. 2015), regardless of construction and syntactic category.

We ran a first Acceptability Judgment Task on adjectival predicates (24 experimental items, 24 filler items), by using a 2x2x3 design with three factors (MATCHING: *match* vs. *mismatch*; CONSTRUCTION: *Pseudostripping*, *Stripping*, *NoEllipsis*; GENDER: *masculine* vs. *feminine*), and paid attention to the gender ordering (Masc>Fem vs. Fem>Masc) and the adjectives' morphology (\pm allomorphy).

The statistical analysis of our 163 participants' acceptability ratings do not show any penalty for gender mismatch in pseudostripping and stripping, any asymmetry effect related to the gender ordering, and any asymmetry effect wrt the morphological shape of predicative adjectives. However, in the non-elliptical construction, our results show a penalty for gender match (i.e. repetition penalty) and a penalty for non-

allomorphic adjectives. We conclude that gender mismatches are perfectly acceptable with predicative adjectives in Romanian stripping-like constructions. On the other hand, the penalty for gender match and non-allomorphic adjectives in the absence of ellipsis supports the 'avoid redundancy' principle, observed for other elliptical constructions (Kim et al. 2011) and anaphoric structures in general (Williams 1997).

By the time of the conference, this first experimental study on adjectival predicates will be supplemented by a second experimental study on mismatches with nominal predicates, which seem to be more restricted, depending on noun class membership (Nunes & Zocca 2009, Bobaljik & Zocca 2011, Merchant 2014, etc.).

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The subject-like characteristics of reflexive clitics in impersonal constructions: Evidence from the Slovenian dialect of Resia

Florian Wandl
(University of Zurich)

Besides marking verbs as reflexive, reciprocal, anticausative, middle, or passive, in Slavic, reflexive clitics are used form different types of clauses which are traditionally referred to as “impersonal” (e.g., Bunčić 2018). In most Slavic languages, these constructions are limited to intransitive verbs, but in Polish, Slovenian, and dialectal/colloquial Bosnian/Croatian/Serbian they can also be derived from transitive verbs (cf. Ex. 1).

- (1) Slovenian
- | | | | | | |
|----------------|-----------|--------------|---|------------|--------------------|
| <i>starše</i> | <i>se</i> | <i>uboga</i> | / | <i>je</i> | <i>ubogalo</i> |
| parents.ACC.PL | REFL | obey.PRS.3SG | | be.PRS.3SG | obey.PST.PTCP.SG.N |
- ‘People obey / (have) obeyed parents’ (Rivero & Sheppard 2003)

The latter type of impersonal constructions has received particular attention in the literature due to its peculiar properties (Rivero & Sheppard 2003):

- it is nominativeless (realization of an NP in the NOM is not permitted);
- it has an invariable verb in the default form: N.SG in the past and 3SG in the present;
- it is transitive (appear with an NP in the ACC or, when negated, in the GEN);
- it has arbitrary reading and must denote humans.

One major question that arises when analyzing these impersonals concerns the function of the reflexive clitic. According to most interpretations, it presents some kind of defective subject pronoun lacking the features gender, number, and person (e.g., Rivero & Sheppard 2003, Kibort 2006, Jabłońska 2007, cf. also Chierchia 1995 on impersonals in Italian). Apart from the above-mentioned characteristics, this is based for instance on the fact that it can occur with reflexive personal and possessive pronouns (e.g., Rivero & Sheppard 2001). This paper provides hitherto unnoticed empirical evidence from the Slovenian dialect of Resia showing that impersonal reflexives can indeed have characteristics otherwise associated with subjects.

Due to intense language contact with Romance, Resian has developed a peculiar system of pronominal clitics which involves subject, object, and reflexive clitics (e.g., Steenwijk 1992, Benacchio 2002). Of these, subject clitics are proclitic to the highest-ranking verb in the clause (i.e., the auxiliary in periphrastic constructions) while object and reflexive clitics are proclitic to their immediate lexical head verb (cf. Ex. 2).

- (2) Resian
- | | | | | | |
|------------|-----------|------------------|-----------|--------------|--------------------------|
| <i>anö</i> | <i>an</i> | <i>bil</i> | <i>se</i> | <i>karjě</i> | <i>wtožil</i> |
| and | he.SC | be.PST.PTCP.SG.M | REFL | very | be.unhappy.PST.PTCP.SG.M |
- ‘and he had been very unhappy’ (de Saint-Exupéry 2021)

By analyzing data from the Resian translation of *Le petit prince* (de Saint-Exupéry 2021), this paper finds that when used to form impersonal clauses, reflexive clitics are placed according to the rules

applying to subject clitics rather than object clitics and “proper” reflexives (cf. Ex. 3). What is more, in all but one of the roughly 80 examples with reflexive impersonals found in the text, the variant *sa* (instead of *se*) of the reflexive is used. Considering further that there is only one instance where *sa* occurs in another function, this suggests an ongoing functional differentiation between the variants *sa* and *se* with the former developing into a marker of impersonal clauses.

- (3) Resian
sa *mä* *je* *gledat*
 REFL have.PRS.3SG they.OC.ACC watch.INF
 ‘One must watch them (...)’ (de Saint-Exupéry 2021)

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The rise of existential HAVE in Late Latin in the passage to Romance

Michela Cennamo
(Università di Napoli Federico II)

This paper investigates the rise of existential HAVE in the transition from Latin to Romance and its paths of development. Existential HAVE constructions in Romance are usually viewed in the literature as stemming from the possessive scheme associated with the transitive verb of possession HAVE (Gaeta 2013; Ciconte 2015: 231; Cruschina 2015: 58, among others).

Early and Late Latin data, however, provide evidence for a different origin of these constructions. More specifically, it is shown that existential HAVE in Romance continues and further develops patterns which became available in Late Latin to 'introduce a new entity or situation into the world of discourse' within a spatio-temporal frame, starting from:

- (i) *the stative-locative meaning* of the verb HAVE ('being in a (physical/abstract) state/place, location') (... *ille geminus, qui Syracusis habet* ... (Plt. *Men.* 68-69) that.NOM twin.NOM who Syracuse.loc has '...that (other) twin, who is in Syracuse ...'),
- (ii) *its non-lexical uses*, witnessed by existential-like 'impersonal' constructions consisting of an adverb+the 3rd singular of the verb alternating with the verb BE, *esse* (e.g., *bene habet/est, recte habet/est* 'it is good', attested in Early (e.g., Plautus) and Classical authors (e.g., Cicero),
- (iii) *its functional equivalence with the copula esse 'be'*, occurring in Early and Classical Latin (Baldi & Nuti 2010: 273, note 34; 278, 376; Pinkster 2015: 97; Ciconte 2015), attested also in equative clauses in Late Latin (*ubi omnia aequalia habent* (Orib. Syn. VII, 49, 10) where all.N.PL alike.N.PL have.PRS.IND.3PL 'Where all these are alike' (Luque Moreno 1998: 140)

Rare examples of existential-like HAVE are reported for Early Latin (Cato, III-II BC) (2), with the verb in the active impersonal form and the nominal in preverbal position in the accusative case (Baldi & Nuti 2010: 275): ... *nisi calicem pertusum cauum habeat* unless cup hole.ACC hollow have.SBJV.PRS.3S '... except that **there is a bowl with a pierced hole**' (Cato, agr. 80,1).

Existential(-like) constructions with HAVE are well attested in Late Latin, in 4th-6th c. texts (e.g., *Itinerarium Egeriae, Mulomedichina Chironis, Palladius, Oribasius, Anthimus*), occurring with [–human], most typically inanimate, indefinite/non-specific pivots (exs. (1) – (2)) and are found also in spatial (*inde ad sanctam Teclam habebat de civitate forsitan mille quingentos passus* from- there to saint Tecla have.IMP.F.3SG from city one thousand five-hundred.M.PL.ACC steps.M.PL.ACC 'From that place to the mountain of God it was perhaps four miles' (*Itin. Eger.* 23,2) and temporal constructions (*Pater eius ... ex quo hinc profectus est habet annos XIII* father.NOM his.GEN from which.ABLfrom-here leave.PST.PTCP.M.SG.NOM be.PRS.IND.3SG **have.PRS.IND.3SG years.ACC** 14 'It has been fourteen years since his father left (from) here' (Hist. Apoll. RA 31) (Svennung 1935: 475-477, 572-573; Leumann, Hofmann & Szantyr 1965: §221, c; Cennamo 2011: 177-179; Pinkster 2015: 97; Panayotakis 2016 and further examples and further references therein).

HAVE is in the third person singular 'impersonal' active (1) and passive (2) forms, with variability of the construction involving three syntactic domains:

(i) **word order: post and pre-copular NP/pivot** (1a) *In Hebraeo ... non habet hunc numerum* (Hier. Ezech. 11. 297B) in Hebrew not have.PRS.IND.3SG this number.ACC 'In Hebrew this number does not exist' vs (1b)... *ibi ... altarium ... habet* (Itin. Eger. 4,4) there ... altar.ACC have.PRS.IND.3SG '... there ... there is an altar'; (2a) *Ibi habetur capella* (Pard. 369, y. 673) there have.MP. PRS.IND.3SG goat.NOM 'There is a goat there' vs (2b) ... *non alter habetur* (Comm. Ap. 374) not other.NOM have.MP.PRS.IND.3SG 'there is nobody else'

(ii) **±agr of the copula habere with the post-/pre-copular NP/pivot: [+AGR]:** (2a) *habetur capella*, (2b) *alter habetur*; [-AGR]: (2c): *habetur ... reliquias* (Diehl, ILCV 2013) have.MP.PRS.IND.3SG remnants '... there are remnants of ...'; (2d) ... *unde ergo habet zizania* (Vulg. Matth. 13, 26-7; Ciconte 2015: 231) whence therefore have.PRS.IND.3SG darnel.weeds.ACC 'From where, therefore, are the darnel weeds?'

(iii) **case-marking of the pre/post-copular NP/pivot: NOM vs ACC:** (2a) *habetur capella* vs (2e) *habetur ... tumulum* (Greg. Tur. glor. conf. 35) have. PRS.IND.3SG.MP tomb.ACC (Mikilová 2016: 158)

It will be shown that the data investigated point to the presence of 'impersonal' HAVE and lack of pivot agreement (in number /case) as the overt markers of a change in progress, leading to the subsequent reanalysis of the locative argument as a non-referential, unspecified argument, the abstract spatio-temporal argument of predication (as witnessed in early Italo-Romance), and ultimately to the new Romance existential construction (step III on the scheme in (3)), where the theme argument (y), the pivot, 'takes the predicating function and is thus predicated of the unspecified (spatio-temporal) argument' (Bentley 2015: 152 and references therein)

Considering the diachronic steps in the changes in the logical structure of HAVE from verb of location/locative copula to an existential copula, illustrated in (3) (adapted from Bentley 2015: 151-152, Ciconte 2015: 231)

(3) I. Be/Have-Loc' (location, theme) > II. Be/Have-Loc' (x, theme) > III Be'/Have' (x,y/pivot) the Late Latin data investigated appear to witness an intermediate stage between steps I and II.

Habere still occurs in its locative and copular functions. It does not consistently occur in the default third person singular, preceded/followed by a non-agreeing nominal, the theme, that is still an argument in the construction, and the locative phrase/adverb in the pattern is fully referential (unlike at stage II, where it has lost its locative meaning, as witnessed in some early Northern Italian texts) (Parry 2013; Bentley 2015: 152; Ciconte 2015).

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Existential and locative clauses across Germanic languages: A corpus-based contrastive view

Pierre-Yves Modicom
(Université Jean Moulin Lyon 3)

The notion of existential construction is frequently used in the description of languages in relation to expressions like English *there is / there are* or German *es gibt*. But this raises considerable issues difficulties if we go beyond these few prototypical examples. One of the most blatant cross-linguistic issues here is: How can we distinguish between locative and existential clauses? And should we? The contribution explores this question drawing on insights from Bentley et al. (2015), McNally (2016), Creissels (2019), Carlier & Lahousse (2023), Gaeta (2023), Gécseg & Sarda (2023). The focus is on Germanic languages (High German, Dutch, Danish, Swedish, English). The study is a corpus-based, contrastive one: using the EUROPARL parallel corpus, I extract the cross-linguistic equivalents of 150 tokens of *there is / there are*. The aim is to investigate the degree of equivalence between the so-called existential constructions of these languages and to assess their sensitivity of information-structure (IS), due to the role played by IS in the typological characterization of existential utterances.

Background: In Germanic V2 languages, syntax is extremely sensitive to information-structure. Dutch and Danish display an existential construction following the “inverse-locational” template (Creissels 2019): *er is* in Dutch, *der er* in Danish. However, the bleached locative marker (*er, der*) is much less strictly bound to the preverbal slot than in the frozen English pattern *there is / are*. In Swedish, the constructions at hand have different origins (*det er, det finns* ‘it finds itself’), like in High German (*da ist* ‘there is’, *es gibt* ‘it gives’). The study of the parallel corpus Europarl reveals that these constructions are not cross-linguistically equivalent.

Findings: 1/ the variations in the constructional realisation of locative-existential meaning are dependent on the constructional autonomy of the information-structural syntactic module (e.g. via scrambling) : the more a language can resort to scrambling to mark information structure, the less its existential constructions are separated from the more general realm of locative predication.

2/ while finding 1 was rather expected, the corpus also shows that the language-specific issue of subjectless passives is a crucial factor in the cross-linguistic comparison.

The preliminary results (as of Dec. 2023) suggest that the role of impersonal passives has to do with the ontology of processes: existential constructions can be used in sentences introducing higher-order entities as new discourse referents in languages like English, whereas High German will typically resort to otherthetic impersonal constructions, most prominently subjectless passives. Thus, the study suggests the existence of a cross-Germanic accessibility hierarchy for existential constructions: in the Dutch and High German parts of the corpus, existential clauses are mostly restricted to first-order entities (which are also the entities for which the border between existential and presentational clauses is the hardest to draw); higher-order entities are introduced viathetic clauses, mostly involving passives; Danish and Swedish expand the use of existential clauses to second-order entities. English can construct any kind of entity in an existential clause.

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Passive and autonomous in Irish. A pragmatically motivated minimal pair?

Viviana Masia
(Roma Tre University)

Keywords: Irish, passive, autonomous, agent-(de)focusing, news language

Irish passive and autonomous constructions have often been characterized as both coding impersonality (Stenson 1989; Blevins 2003; Nolan 2012), in that they are both agent-defocusing strategies. However, as shown in (1) and (2), while passives allow the surface realization of an agent as the object of a preposition (*ag* “at”), autonomous verbs do not, nor do they involve the promotion of the object to subject function.

Passive

- (1) *Tá sé geallta ag na hIosraelaigh*
Be SUBJ.3SG promise.PRET at DET Israelis
“It has been promised by the Israelis”

Autonomous

- (2) ***Tuairiscítear*** *Gaza a bheith i bhfad níos ciúine inniu (*ag iriseoirí)* Report.AUT Gaza be.PROGR much more quiet today (*by journalists) “Gaza is reported (*by journalists) to be much quieter today”

The downgrading of the agent in both construction types in Irish has often been put down to its correlating with a familiar referent or with a less salient one (Stenson 1989; Nolan 2012). This account nonetheless clashes with the way autonomous and passive verbs are used in certain contexts, such as newspaper articles, for example. What emerges from these contexts is that passives of the type exemplified in (1) more typically occur when the agent is both informationally new and salient (Sansò 2006: 251), despite its being syntactically demoted. By contrast, sentences with autonomous verbs are more common when the intention of the writer is precisely to avoid mentioning the agent at all, irrespective of its being given, new or semantically (un)specific (McCloskey 2007; Nolan 2012).

Based on data collected from the Ireland’s National Public Service Media (RTÉ) over the last 10 months, I will show that Irish passives in these text types are mostly used to focalize the agent - rather than backgrounding it – while simultaneously endowing the patient with the role of subject and topic of the sentence. On the contrary, autonomous verbs are used when the agent is informationally non-salient and when the main focus is on the event itself (Ó Sé 2006). From a theory-driven perspective, these particular uses of passives in Irish may have been fostered by the presence of autonomous verbs, with which they seem to be in a pragmatically oriented complementary

distribution. On an information structural basis, while autonomous sentences more remarkably pattern withthetic statements (Sasse 1987) – in that they do not contain any entity the main event is predicated about – canonical passives rather seem to display a topic-focus articulation (Lambrecht 1994; Cresti 2000), with focus mostly coinciding with the agentive prepositional phrase introduced by *ag*.

On balance, rather than bringing about impersonalization, through an agent-defocusing operation, passives in the Irish texts considered seem to create a *situation type* (Kemmer 1993) in which the promoted patient is construed as the sentence topic as well as the center of the speaker's empathy (Myhill 1997; Sansò 2006) and the agent is kept a salient participant in the unfolding of the event. Data from other oral and written sources will help shed further light on this suggested reanalysis of both Irish passives and autonomous constructions.

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NP vs. DP: A spectrum of articleless languages

Aida Talić
(University of Illinois)

Keywords: nominal structure, Telugu, extraction, modifiers, pronominalization

Typological differences between languages with and without articles have led to a parametric approach to the nominal structure, where only the former project a DP (Bošković 2008, *et seq*). Telugu is not investigated in Bošković's work, but a related Dravidian articleless language, Kannada, has been classified together with Bosnian/Croatian/Serbian(BCS)(1). Some later cross-linguistic work further shows some languages exhibit mixed behavior and are not easily classified within the two-way NP/DP cut, arguing for a three-way typology, where affixal-article languages represent a middle case between NP- and DP-languages (Talić 2015, 2017). In this paper, I investigate modifiers in Telugu, comparing their behavior to that of adjectives/adverbs in English, BCS, and Dholuo, to shed light on the syntactic structure of the nominal domain in Telugu. Crucially, left-branch extraction (LBE) out of nominal phrases, adverb extraction (AdvE) out of adjectival phrases and a type of pronominalization with the particle *-di/-vi* all indicate Telugu projects functional structure above NP, despite lacking articles.

Telugu does not have articles, but it uses *oka* 'one' and *aa/ii* 'that/this' to disambiguate indefinite and definite nominal phrases. However, these do not realize D because: (i) Telugu is a consistently head-final language (2), so if the demonstrative were realizing the D head, we'd expect it to *follow*, not *precede* elements within NP (6a'); (ii) it is also possible to use a bare noun to express a definite interpretation (3). Crucially, Telugu patterns with DP languages regarding several phenomena separating languages with and without articles. E.g., Shimamura (2014) observes that while short-distance scrambling is possible, long-distance scrambling is disallowed, in which case Telugu patterns with German, a DP language. It has also been argued the presence of functional structure above NP and AP blocks adjunct extractions out of these domains; e.g., this is how Bošković (2013) accounts for (4a) and Talić (2017) accounts for (5a) under a contextual approach to phases (4b-c)(5b-c). Interestingly, Telugu also patterns with non-affixal-article languages in disallowing both LBE and AdvE (6)/(7). Now, while (4a) and (5a) are one-way correlations and the lack of LBE even in some articleless languages has been linked to the lack of concord (e.g., even BCS disallows it with non-agreeing adjectives), AdvE is not dependent on concord, since adverbs don't agree, indicating that Telugu has functional structure above AP and by parallelism(8) above NP. Furthermore, when N is dropped, Telugu modifiers carry a pronominal element *-di/-vi* resembling English *one*-replacement, with the distribution in (9). Descriptive adjectives and demonstratives behave in the opposite way, while demonstratives pattern with descriptive adjectives when they appear alone, but with numerals when they precede adjectives.

I propose that quantifiers and demonstratives are in projections higher than NP, QP and DP respectively. Thus, their presence does not prevent the pronoun from attaching to A (9f&i), while the presence of another modifier within the NP does (9c). Crucially, the presence of DP also straightforwardly captures the lack of extractions (6)/(7). Thus, Telugu is an articleless language with a DP, just like Swahili (Carstens 2008) and Dholuo (Talić 2021, Dees 2021).

- (1) a. [DP [NP ...]] → languages with articles (e.g. English, Bulgarian)
 b. [NP ...] → languages without articles (e.g. Bosnian, Kannada, *Telugu?*)
- (2) a. neenu [aratipanD-lu] **ṭinnaanu** [Telugu]
 I banana-PL eat-PAST-1SG
 'I ate bananas.'
 b. oka aratipanD-la Dabba [tejbl] **paina** unḍi
 one banana-PL box table on be.3.SG
 'A box of bananas is on the table.'
 c. Raaḷu [aratipanD-lu ṭinn-aa-nu]=**ani** čēpp-ææ-Du
 Raaḷu banana-PL eat.PAST-1SG=like.this say-PAST-M.SG
 'Raju said that he ate the bananas.'
- (3) **pustakam** errgaa unḍi
 book red be.pres
 'The book is red.'
- (4) a. **Left-branch extraction (LBE) of adjectives may be allowed only in article-less languages.**
 b. [DP [NP ...]] → DP blocks LBE
 c. [NP ...] → no DP present, so LBE possible (Bošković 2013)
- (5) a. **Languages with non-affixal articles disallow Adv-extraction out of predicative adjective phrases, but languages without articles and languages with affixal articles may allow it.**
 b. [XP [AP ...]] → XP blocks AdvE
 c. [AP ...] → no XP present, AdvE possible (Talić 2017)
- (6) a. ***aa**_i Raaḷu [t_i **illu**] katt-ææ-Du **Dem**
 that Raju house build-PAST-M.SG
 a'. cf. Raaḷu **aa illu** katt-ææ-Du
 'Raju built that house.'
 b. * Raaḷu **ettajina**_i maamuluga [t_i **bilding-lu**] kaDu-tuu un-taa-Du **Adj**
 Raaḷu tall usually building-PL build-DUR be-INFL-3.SG
 b'. cf. Raaḷu maamuluga **ettajina bilding-lu** kaDu-tuu un-taa-Du
 'Raju usually(often) builds tall buildings.'
- (7) ***ṭanu**_i **čaala**_i eppuDuu [t_i **alasipooji**] un-taa-Du **Adv**
 he very always tired be-INFL-3.SG
 cf. ṭanu eppuDuu čaala alasipooji un-taa-Du.
 'He is always very tired.'
- (8) Structural Parallelism:
 a. If a language always requires functional structure within TNP (DP), it also always requires functional structure in TAP (XP);
 b. If a language allows a bare NP, it also allows a bare AP. (Talić 2017: 32)

(9) The Distribution of the pronominal *-di* with adjectives, demonstratives and numerals

a. * A	d. ✓ Num	g. * Dem
b. ✓ A-di	e. * Num-di	h. ✓ Dem-di
c. * A A-di	f. ✓ Num A-di	i. ✓ Dem A-di

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Multivariate collocation analysis via association rules

Kim Ebensgaard Jensen & Stefan Th. Gries
(University of Copenhagen & University of California)

Keywords: association rules, constructional feature interaction, constructional multi-dimensionality, internal/external constructional properties, usage-based construction grammar

In usage-based construction grammar (henceforth, UBCG), constructions are considered entrenched routines in a speech community that pair form and meaning (Croft 2005: 274). In usage-based language models, context plays a crucial role in the operation of the language system Kemmer & Balow (2000). A theoretical consequence is that several contextual features may not only be stored in speakers as constructional information but may even in some cases be what determines constructionhood. Therefore, within UBCG framework, empirical methods of constructional analysis and description should ideally be able to account for multiple contextual features and patterns of interaction among such features.

This paper presents an exploratory corpus-based study of 2 English constructions: the *go (a)round Ving* construction, and the *go (a)round and V* construction (Stefanowitsch 2000):

- (1) I got news for you, you little psycho, you can't go around slaughtering everyone who pisses you off. (COCA 2019 TV The Gifted)
- (2) What you do is, you go around and arrest people for petty crimes. (COCA 2015 SPOK PBS_Newshour)

Methodologically, this paper goes much beyond previous work by proposing a multivariate approach that, in a sense, combines distinctive and co-varying collexeme analysis by incorporating not just information about 2+ constructions and one slot in them, but by utilizing 8 different features and how they differentiate between two constructions using the method of association rules (Hahsler et al. 2005), a simple but effective way to exploratorily identify intercorrelations between constructions and many of its characteristics at the same time.

Our study draws on data from the *Corpus of Contemporary American English*, or COCA and addresses collexemes, VP-colligations, modality types, polarity types, semantic and discourse prosodies, registers, and speech acts, and identifies patterns of interaction among. Results reveal interesting preferential patterns. For instance, in *go (a)round Ving*, verbs of VIOLENCE prefer directive speech acts while verbs expressing VERBIAGE (such as *say* and *tell*) prefer commissive speech acts. Modalized instances of the same construction in the TV, movies and fiction registers prefer negative discourse prosodies and prefer neutral ones in the magazine register. The *go (a)round and V* construction displays colligational variation but prefers the spoken register.

This study contributes to UBCG, emphasizing the significance of contextual features and intricate patterns of feature interaction within constructions, and the application of association rules in collocation analysis is a first step to a much more multidimensional understanding of co-occurrence patterns in/and constructions.

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Adverbial clauses for new information in Movima (isolate, Bolivia)

Katharina Haude
(CNRS – *Structure et Dynamique des Langues*)

Keywords: adverbial clause, nominalization, information structure mismatch, presupposition, discourse

New information is sometimes presented as if it were familiar to the hearer (Prince 1978). This is done by using structures that typically convey presupposed information, such as cleft phrases, definite descriptions, or adverbial clauses. Thompson et al. (2007: 296) remark that in English, postposed adverbial clauses can be used to “encode information of greater significance than that in the respective main clause” in order “to create a dynamic surprise”. This use of postposed adverbial clauses is a systematic discourse-structuring device in Movima, an isolate of lowland Bolivia.

Movima adverbial clauses are oblique-marked DPs containing a nominalized predicate. A prototypical adverbial clause, as in (1), contains information that is known from the linguistic or extralinguistic context. It precedes the main clause, which conveys new information.

An adverbial clause conveying new information occurs after a pronominal predicate (*a'ko/asko* “That is/was”), which refers to the preceding context. This construction tends to be used at central points of a narrative. In (2), which stems from an account of why someone limps, the central event (the protagonist breaking her leg) is described in the adverbial clause. The translation reflects the difficulty to transfer this construction in English.

The internal structure of the adverbial clause in (2) corresponds to that in (1), but its external and informational properties are different: it follows the main clause, which consists only of a pronominal predicate, and conveys new information, reporting an event that follows the events subsumed by the pronoun. In this way, the adverbial clause in (2) has the same external structure as the oblique DP in (3), which contains a simple noun and represents the assertive part of the sentence. Still, in sentence of the type in (3), the existence of the referent of the DP is presupposed, while the information conveyed by the deverbal noun in (2) is completely new.

Thus, Movima postposed adverbial clauses comply with the characterization given by Thompson et al. (2007) in conveying central information despite being primarily backgrounding devices. Based on the analysis of 55 spontaneously produced texts from 18 different speakers, the talk contributes to the study of discourse organization and information-structural mismatches in spontaneous discourse in typologically underrepresented languages.

Examples

(1) Standard use of a Movima adverbial clause

Jayna [n-os ma~man-wa=us], jayna chi:chi os pa:ko.

then OBL-ART DR~shoot-NMZ=3M then go_out ART dog

‘(He ran and shot the jaguar). Then [when he shot (it) (lit.: “at his shooting (it)”], the dog came out (of the jaguar’s grip).’

(2) Pronominal predicate + adverbial clause conveying new information

Low-na=is os kare:ta, che jayna asko [n-os

pull-DR=3PL ART oxcart and then PRO.N.COP OBL-ART

katpit-wa=os dinoja=sne].

break-NMZ=ART thigh=3F

(The oxen got scared and started running.) ‘They pulled the oxcart, and then that was [when her leg broke (lit.: “at her leg’s breaking”)].’

(3) Pronominal predicate + oblique DP

asko [n-as sitkwa]

PRO.N.COP OBL-ART well

‘It (= the water) is from the/a well.’ (i.e. it’s good water)

Abbreviations

AB=absential; ART=article; COP=copula; DP=determiner phrase; DR=direct voice; F=feminine; M=masculine; N=neuter; NMZ=nominalizer; OBL=oblique; PL=plural; PRO=free pronoun

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Complexity of valency-encoding devices in pre- vs. postverbal positions

Sergey Say & Ilja Seržant
(University of Potsdam & University of Potsdam)

Keywords: typology, complexity, valency

Languages substantially vary as to their valency-coding devices (flagging & indexing) (Haspelmath 2015). We hypothesize that this variation is nevertheless not always accidental but is constrained by domain-general pressures favoring more efficient patterns in production, comprehension and learning. Thus, a hypothetical maximally straightforward system (e.g. all bivalent verbs are transitive) would maximize learnability and minimize the production effort to code the argument-related information minimally necessary for correct interpretation. A hypothetical maximally complex system (each individual verb is associated with an idiosyncratic argument-coding) would be easy for the hearer, but require high production efforts (large amount of redundant information) and would be very difficult in terms of learnability. Each actual valency class system displays a degree of complexity somewhere between these two and probes a point of equilibrium between efficiency in learning and lexicon composition vs. maximal informativeness.

We propose a technique for measuring the degree of complexity of valency class systems and explore the difference between complexities observed in pre- and postverbal positions cross-linguistically. Our measurement is based on Shannon's entropy (cf. Levshina 2019 for a similar approach to word order phenomena), where argument-coding devices are viewed as discrete values of a variable, characterized by their probabilities. From this perspective, languages with richer valency class systems will display higher entropy of their argument-coding devices.

We use two sources of typological data. i) Universal Dependencies (UD, see de Marneffe et al. 2021); in this case we enriched the annotation in order to capture the differences between individual valency classes, and ii) BivalTyp, a typological database of bivalent verbs and their coding frames (Say 2020+). We measure the complexity of valency class systems as a whole in terms of token/corpus frequencies in (i) and in terms of type frequency (in the lexicon) in (ii). We focus on a smallish sample of languages that are sufficiently well represented in both sources (Bambara, Basque, Chukchi, Finnish, French, German, Modern Greek, Lithuanian, Russian, Turkish).

This is work in progress and our preliminary findings are as follows.

1. There is a strong correlation between valency class complexities in the lexicon and in the corpus. Differences in the degree of complexities in valency class systems is a robust parameter of typological variability that remains underrepresented in typological research.
2. The data from BivalTyp do not indicate any systematic correlation between the degree of complexity and basic word order (VO vs. OV). This finding is unexpected given the standard assumption that SOV language tend to employ case more often than SVO for purposes of distinguishing core arguments (Dryer 2007: 110).
3. This said, there are systematic differences between pre- and post-verbal arguments at the intra-linguistic level: postverbal arguments tend to accumulate more complexity than preverbal arguments (Bambara is an extreme case where this discrepancy has the form of a rigid rule of grammar).

We contextualize these findings in incremental processing (Kempen, Hoenkamp 1989), whereby speakers tend to not have access to idiosyncratic valency-encoding devices before the verbs has been processed.

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Exploring the grammar of deeply embedded clauses in Finno-Ugric

Edyta Jurkiewicz-Rohrbacher, Petar Kehayov & Triin Todesk

(Universität Hamburg; Universität Regensburg, University of Tartu & University of Tartu)

Keywords: Finno-Ugric languages, recursion, deeply embedded clauses, type of subordinate clause, time reference

A deeply embedded clause (DEC) is a finite or non-finite clause embedded in a clause which itself is embedded. Sentences with multiple embeddings can be formalized [C [C1 [C2 [C3 [...]]]]], where C = main clause, C1 = first-order embedded clause, C2 = second-order, C3 – third-order, etc.; see (1) from Estonian. Any clause below C1 is deeply embedded. The properties of DEC's and their grammatical relations to other parts of the sentence are poorly studied (but see Karlsson 2010, Blasi et al. 2019). This is related to the idea of recursion as a fundamental property of language. If rerunning the same procedure leads to reproduction of the same structure, we cannot expect to find anything new in DEC's compared to the first-order embedded clauses. Therefore, grammars and even special studies on complex sentences consider the issue of clausal subordination exhausted with the description of C1.

- (1) [_{C=}*Arusaadavalt ei saanud minister Kallas endale lubada,* [_{C1=}*et*
understandably NEG get:PST.CNG minister Kallas REFL:ALL afford.INF COMP
alustab ministriametit sellega, [_{C2=}*et ostab kantslerile,*
start:PRS.3SG ministerial_term:PART it:COM COMP buy:PRS.3SG chancellor:ALL
[_{C3=}*kellest ta nagunii tahtis lahti saada,*] *uue auto*]]. (ENC 2019)
who:ELA 3SG anyway want:PST.3SG rid get:INF new.GEN car:GEN
'Understandably, Minister Kallas could not afford to start his ministerial term so that he buys a new car for the Chancellor, whom he wanted to get rid of anyway.'

We study the properties of DEC's in three Finno-Ugric languages: Estonian, Moksha Mordvin, and Komi. Sentences with DEC's are retrieved from electronic corpora: ENC (2019) for Estonian, CCLM for Moksha, and KKK and KORP for Komi. We monitor the interplay between the variable 'embedding depth' and the variables 'position of the clause relative to the higher clause', 'type of the embedded clause', and 'time reference of the DEC'.

We show that DEC's are not entirely identical with first-order embeddings, i.e., that embedding depth is a factor influencing the grammar of subordinate clauses. This challenges the idea that a description of the relationship between the main and first-order embedded clauses suffices to exhaustively elucidate clausal subordination in a language. For example, complement clauses are less likely and relative clauses more likely to be DEC's than first-order embeddings. DEC's are more likely to have relative time reference and less likely to have absolute time reference than first-order embedded clauses.

Letuchiy (2021: 525–529) argued that some characteristics of DEC's challenge the recursion postulate, which implies that the properties of complex sentences can be reduced to a sum of bi-clausal relations, i.e., [C [C1 [C2 [C3]]]] = [C [C1]] + [C1 [C2]] + [C2 [C3]]. Some characteristics of a deeply embedded clause cannot be predicted from its relation to the immediate superordinate clause but may be governed elsewhere in the sentence (e.g., by the ultimate main clause). Letuchiy (2018, 2021: 525–

570) illustrated this for time reference, and we will delve into the factors conditioning such long-distance relationships.

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Numberless count nouns in Danish: Rejecting a non-contrastive zero

Peter Juul Nielsen
(University of Southern Denmark)

Keywords: indeclinable nouns, zero signs, number inflection, count nouns, Danish

In modern Danish, a substantial group of nouns that denote countable concepts exhibit no formal distinction between singular (SG) and plural (PL) in the indefinite form, e.g. *mus* 'mouse', in contrast to the majority of count nouns where SG is formally unmarked, i.e. expressed by a zero sign, and PL is expressed by a suffix (e.g. *bil-er* 'cars') or by stem change (e.g. *mænd* 'men'), cf. Table 1.

	Noun gloss	Indefinite	Definite
Singular	'mouse'	<i>mus</i>	<i>mus-en</i>
	'car'	<i>bil</i>	<i>bil-en</i>
	'man'	<i>mand</i>	<i>mand-en</i>
Plural	'mouse'	<i>mus</i>	<i>mus-ene</i>
	'car'	<i>bil-er</i>	<i>bil-er-ne</i>
	'man'	<i>mænd</i>	<i>mænd-ene</i>

The established interpretation of the morphology of the *mus* type is that it has a zero PL ending, which entails that *mus* exhibits a structural contrast between SG zero sign and PL zero sign (Hansen & Heltoft 2011: 488; Nielsen 2016: 217-219, cf. Basbøll 2005: 369 who rejects zero as a PL expression element but assumes a semantic SG/PL distinction). In contrast, this paper argues that *mus* and similar nouns constitute a class of numberless count nouns that are essentially indeclinable (cf. Russian indeclinable nouns, Timberlake 2006: 148-150). The analysis is based on Mel'čuk's (2006: 470-471) criteria for positing zero signs, first of all the contrastiveness criterion, and the theoretical framework is structurally informed sign-based functionalism (Engberg-Pedersen et al. 1996, 2005; Harder 1996). The empirical data of the study are obtained from the OLAM-database of Danish word structure (Madsen et al. 2002).

The SG/PL contrast of the definite forms *musen-musene* (cf. Table 1) may appear to save number inflection of the *mus* class, but the definite ending should be disregarded in the analysis. Definiteness is a mandatory category of the NP (Hansen & Heltoft 2011: 464) which is not mandatorily marked morphologically on the noun; it may be expressed syntactically by a determiner (1).

- (1) *den lille mus*
ART small mouse
'the small mouse'

Number is the core inflection bound to nouns (Hansen & Heltoft 2011: 486), while the definiteness category is peripheral, which is reflected in the fact that only number (PL) can have a lexically specified

unproductive ending, while definiteness is always expressed by the fully productive non-integrated ending (-en/-et/-ene) (Basbøll 2005: 358, 368).

The morphological definite marker is a morpheme bundle that combines marking of definite form, gender and number (Heltoft 2001, Hansen & Heltoft 2011: 466). The contrast SG -∅ vs. PL -e in the morphologically definite noun forms is the definite ending's "own number inflection" which agrees with the true number inflection of the noun (if any), cf. agreement with the SG/PL stem alternation in *mand-en* vs. *mænd-ene* in Table 1. Thus, the marking of plural in the definite plural *musene* 'the mice' is not a number inflection of the noun stem.

The paper discusses further morphological and syntactic as well as semantic aspects of the numberlessness of the indeclinable nouns, including communicative ambiguity.

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Da die zeit erfüllet ward/ (da/so) were preposed adverbial clauses integrated: Resumption and integration in 15th–17th c. German

Barthe Bloom
(University of Potsdam)

This study investigates the development of the position of preposed adverbial clauses in 15th–17th c. German and argues that the development from resumption into integration depends on the type of resumptive element.

In Early New High German, preposed adverbial clauses were not necessarily integrated (1), but regularly occurred in a position before the prefield, especially frequently with a type of resumptive element intervening between the adverbial clause and the finite verb, as in (2) and (3).

- (1) *Da die zeit erfüllet ward **sandte Gott** seinen Sohn*
lit. 'When the time had passed, sent God his son.' (DTA, Hafenreffer)
- (2) *Do nun der dritte morgen vergieng. **so kommt die schoe ne iunkfraw** in einem grünen kleÿde*
lit. 'When the third morning passed, so comes the beautiful lady in a green dress.' (Roko.UP, Melusine)
- (3) *vnd da alle ding bereyt waren **da gieng sie** zuo dem Peter*
lit. 'And when all things were ready, then went she to Peter.' (Roko.UP, Magelone)

The patterns presented in (1–3) are thought to be reflective of a diachronic development of the position of adverbial clauses, which has been claimed to move from juxtaposed via resumption to complete integration (König and van der Auwera, 1988; Axel, 2004; Lötscher, 2006). However, Meklenborg (2020), Catasso (2021) and Axel-Tober (2023) have indicated that *da* and *so* in (2) and (3) is not one homogeneous phenomenon. Instead, they identify two different types (generalized vs. specialized). From a constructional perspective, the two patterns illustrated in (2) and (3) have also been argued to not instantiate one and the same construction, evidenced e.g., by their differences in their role in structuring narration and the type of adverbial clauses they collocate with (Bloom, 2023). These facts raise the question whether both resumption-constructions gave way to integration, and if so, whether they did so at the same time?

Based on a data set of 1500 preposed adverbial clauses extracted from the Roko.UP (Bloom et al., 2023), it has been argued that *da*-resumption shows a high degree of similarity with integration in Early New High German, whereas *so*-resumption does not (Bloom, 2023). This leads to the hypothesis that integration first takes over from *da*-resumption, and that the restriction in productivity of *so*-resumption is a separate development. If this is the case, it is expected that the frequency of *da*-resumption and the increase of integration are negatively correlated, whereas the use of *so*-resumption remains stable or at least shows a weaker correlation.

The hypothesis is tested by a data set of approximately 2400 preposed adverbial clause, containing clauses introduced by the conjunctions *als*, *da*, *ob*, *so*, *wenn* and V1 adverbial clauses, which has been extracted from the Deutsche Text Archiv (1450–1700) (DTA, 2023).

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Redundancy in person marking: Subject pronoun expression in a cross-linguistic, multifactorial design

Maarja-Liisa Pilvik, Mari Aigro, Piia Taremaa, Anastasia Chuprina, Justyna Mackiewicz, Rodolfo Basile,
Dagmar Divjak, Virve-Anneli Vihman & Liina Lindström

(University of Tartu, University of Tartu, University of Tartu, Radboud University, University of
Birmingham, University of Tartu, University of Birmingham, University of Tartu & University of Tartu)

Keywords: pro-drop, redundancy, spoken language, Uralic, Slavic

This study investigates the expression of 1st and 2nd person subject pronouns in spoken language data from four languages originating from two language families: Estonian, Finnish (Finnic, Uralic), Russian and Polish (Slavic, Indo-European). In these languages, verbs are marked for person and number and personal pronouns are often omitted without losing referential information. This is expected especially in the case of 1st and 2nd person forms which are typically referentially grounded in the speech situation. However, both grammatical means (pronouns and verb forms) can be used simultaneously, creating redundancy in person marking and raising more general questions about the roles of redundancy and efficiency in language (see also Trudgill 2011, Leufkens 2020).

Studies have revealed various factors that facilitate overt pronoun expression in individual languages, such as singular number (Erker & Guy 2012), switch in referent (Erker & Guy 2012, Nagy 2015, Wagner 2018), mental activity and perception verbs (Erker & Guy 2012, Carvalho, Orozco & Shin 2015, Wagner 2018), and short and simple verb phrases (Wagner 2018). The present study compares data from four languages in a large-scale multifactorial design, investigating the extent of overt vs. omitted pronominal subjects, conditions facilitating their use, and the variation in effects of diverse contextual factors cross-linguistically. The datasets originate from spoken language corpora, two of which (Estonian and Russian) constitute transcriptions of spontaneous conversations, and two (Finnish and Polish) are based on subtitle corpora. The study includes an implicit comparison of natural spoken language with scripted and translated representations of spoken language. The dialogue in subtitles is meant to reflect spontaneous speech but does not actually involve spontaneous interaction. It is also intended to be perceived in a limited space and read quickly. These characteristics are expected to lead to a reduction in linguistic redundancy in the subtitles, compared to spontaneous spoken language.

Random samples of 2000 observations of affirmative indicative verb forms were drawn for each language. The distribution of extracted forms followed the overall distribution of the forms in the corpora in terms of person and number. The data were manually coded with regard to a wide range of variables, including factors related to semantics (verb type), morphosyntax (person, number, verb tense, clause complexity, sentence type, clause type), as well as memory and processing (recency of mention, referent switch, structural persistence). Mixed-effects logistic regression was applied to the annotated datasets to describe the choice between overt and covert subject pronouns in each language.

Preliminary results show varying proportions of overt pronoun expression (72% in Estonian, 57% in Russian, 14% in Finnish, 6% in Polish). Variables related to processing and verb semantics seem to promote pronoun use in all languages unidirectionally, although with different magnitudes, while morphosyntactic variables show considerable cross-linguistic variance. In the talk, we discuss the

degree to which differences in the modelling results can be attributed to differences between the language families or differences between the data sources, and consider implications of the results for linguistic redundancy.

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Constructional variation as the choice of form and meaning: Initiator-defocusing constructions in Spanish digital media

Miguel A. Aijón Oliva
(Universidad de Salamanca)

Keywords: Spanish, syntactic variation, defocusing, passives, impersonals.

Models of variation as simultaneously involving form and function (e.g., Finegan & Biber 2001, Hasan 2009), together with the postulates of Construction Grammar (Hilpert 2014, Gras 2021), make it possible to claim that the association of constructions with social and situational variables is often communicatively and cognitively motivated (Serrano 2022; García Yanes, in press). In other words, that sociolinguistic variation is not a mere result of the (arbitrary) psychosocial evaluation of different linguistic forms, but is at the same time related to the semantic and pragmatic meanings respectively attached to them.

To pursue this view of variation, the present study deals with a number of Spanish constructions that defocus the initiator (agent or experiencer) with respect to the prototypical active clause: *ser* 'be' passives; reflexive passives and impersonals; non-phoric plural third persons, and the impersonal modal *haber-que* + infinitive. It has been shown that different constructions entail different conceptualizations of the initiator, both in terms of its semantic role—e.g., whether it is seen as more or less agentive—and its possible contextual reference—e.g., whether it is specific or generic, or whether it includes the speaker and/or the audience. Some studies have also pointed out that defocusing constructions are unevenly distributed across speaker groups and communicative situations (RAE & ASALE 2009; Posio 2015; Serrano 2020, 2022; Aijón Oliva 2022). However, it is not yet clear whether and to what extent such distributions are related to their respective functional properties.

The analysis is based on a 200,000-word corpus of digital media discourse. This corpus is divided into three types of text sequences, namely news items, reader comments on them, and opinion pieces. They are all differentiated according to the dominance of informative vs. argumentative functions, as well as the contextual identities respectively assumed by their authors—journalists, anonymous readers, and invited intellectuals and professionals. The methodology combines quantitative analysis and qualitative observation (Schilling 2013: 149; Szmrecsanyi & Engel 2023: 94). The normalized frequencies of the constructions across genres and identities are interpreted according to the semantic and pragmatic motivations they display in specific contexts.

The expected dominance of *ser* passives in news discourse can be connected with the fact that their primary function is not to defocus the initiator, but to topicalize the endpoint (Aijón Oliva 2022: 360-362). Informational media texts are often more concerned with facts and their outcomes rather than with their actors. On the other hand, the non-phoric plural third person reaches a much higher frequency in readers' argumentative comments. This construction is associated with the concealment of specific individuals or corporations (Posio 2015: 378) and is therefore less suited to the demands of objective information as is expected from professional journalists. Nevertheless, it appears with some frequency in news headlines, due to its usefulness in condensing information. All this suggests the need to consider different semantic, pragmatic and discourse functionalities of constructions in order to explain their distribution across text types and speaker groups.

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Double-Subject Constructions in Chuvash

Yuto Hishiyama
(Niigata University)

Keywords: Chuvash, Turkic, double-subject, topic, agreement

The Chuvash language (Oghur branch, Turkic) has double-subject constructions as in (1). However, there are no previous studies on double-subject constructions in Chuvash. What kind of double-subject constructions are possible in Chuvash? What characteristics do they have compared to those in other languages?

- (1) věsem-∅ numay-ăšě-∅ *xalě=te* *purăn-aśśě*
3PL-NOM many-3.POSS-NOM now=ADD live-PRS.3PL

“As for them (lit. They), many of them are still alive today.” (The Bilingual Corpus of Chuvash)

This research aims to clarify the characteristics of double-subject constructions in Chuvash by 1) observing example sentences extracted from the web-corpus “The Bilingual Corpus of Chuvash”, 2) investigating acceptability with the cooperation of a native consultant, and 3) comparing them with double-subject constructions in other languages.

The survey revealed that the double-subject construction in Chuvash is a construction in which an oblique element of a partitive construction is marked in the nominative case and is topicalized, and has the following features.

Cross-linguistically, in double-subject constructions, 1) the first subject is the topic, and the rest, including the second subject, are comments, 2) the core semantic relationship between the first and second subjects is a whole-part relationship (Onoe 2004 on Japanese, Soliman 2009 on Standard Arabic, Langacker 2017). These features also apply to the Chuvash double-subject construction.

A characteristic feature of the Chuvash double-subject construction is that only elements which denote quantity or property of the first subject are allowed as the second subject, such as a nominalized determiner (e.g., *kašniyě* ‘each of them’, *kivvi* ‘old one’), or a quantifier phrase (e.g., *temiše šin* ‘some people’). These elements constitute the head of partitive constructions (e.g., *věsen-čen numay-ăšě* [3PL-ABL many-3.POSS] ‘many of them’). Thus, what becomes the first subject is an oblique element of a partitive construction, which is marked in the nominative case and is topicalized (e.g., *Věsem-∅ numay-ăšě* [3PL-NOM many-3.POSS] ‘As for them (lit. They), many of them’). This type of double-subject construction is not common cross-linguistically.

Another characteristic feature is that not the second subject, but the first subject agrees with the predicate in most cases, as in (1). This differs from the typical agreement pattern of double-subject constructions, where the second subject agrees with the predicate, as in Standard Arabic (2).

- (2) Muhammad-un saiyārat-u-hu *kabīrat-u-n*
PN.M.SG-NOM car.F.SG-NOM-3.M.SG big.F.SG-NOM-INDEF

“As for Muhammad (lit. Muhammad), his car is big.” (Soliman 2009: 4)

This agreement pattern is due to the semantic properties of both subjects. In the Chuvash double-subject construction, the referent of the first and the second subjects is the same. Therefore, both subjects are the agent of the action expressed by the predicate. Comparing the two, the first subject is more likely to be recognized as the actor because it represents a concrete object. The second subject, on the other hand, is less likely to be recognized as the actor because it represents an abstract concept such as quantity or property.

Thus, the Chuvash double-subject constructions have characteristic features from a cross-linguistic perspective. This study provides important knowledge for cross-linguistic research on double-subject constructions.

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Inverted ergative construction in Tsugni Dargi (Nakh Daghestanian, Russia)

Gasangusen Sulaibanov
(EPHE)

The variety of Dargui spoken in the village of Tsugni (Daghestan, Russia) is like other Nakh-Daghestanian languages in that it has ergative alignment. However the usual encoding of transitive constructions (1, where A is in the ergative and P in the nominative) can alternate with another type of encoding whereby A bears nominative case and P bears ergative case (2); accordingly we refer to this construction descriptively as “the inverted construction”.

(1) Ergative construction

<i>dali</i>	<i>hin-ni-c:e</i>	<i>q:arqne</i>	<i>irx-ub-da.</i>
1ERG	water-OBL-INTER(LAT)	stone.PL	throw.IPF-PRÉT-1

‘I threw rocks in the water.’

(2) Inverted construction

<i>du</i>	<i>hin-ni-c:e</i>	<i>q:arqna-li</i>	<i>irx-ub-da.</i>
1	water-OBL-INTER(LAT)	stone.PL.OBL-ERG	throw.IPF-PRÉT-1

‘I threw rocks in the water.’

While this construction is treated in the literature on Nakh-Daghestanian as an antipassive construction (Authier 2016, Creissels 2020, Comrie et al. 2021), no analyses of the construction have been proposed that can explain its syntactic and semantic properties. In fact, it has syntactic and semantic properties that make it unlike antipassives (or other constructions) in other languages.

In addition to their being no marker on the verb encoding this construction, it can be used only if specific conditions hold of the verb and the P argument: 1) the aspectual V stem must be imperfective (2 vs 3), 2) the P argument must denote a non-cardinalized non-atomic entity (e.g. a non-cardinalized plural count noun (4) or a mass noun), and 3) P does not refer to a human. In addition, the P argument in the inverted construction cannot be dropped (5 vs 6).

(3)*

<i>du</i>	<i>hin-ni-c:e</i>	<i>q:arqna-li</i>	<i>ix-ub-da.</i>
1	water-OBL-INTER(LAT)	stone.PL.OBL-ERG	throw.PF-PRÉT-1

‘Je jetais des pierres dans l’eau.’

(4)

<i>du</i>	<i>hincba-li /</i>	<i>*hinci-li</i>	<i>r-uk-ad</i>
1	apple.PL.OBL-ERG	apple-ERG	F-eat.IPFV-1EVT

‘Je (F) vais manger des pommes/*une pomme.’ (la pomme va me manger)

(5)

<i>du</i>	<i>č'ibna-li</i>	<i>w-ilʔ-aʔd</i>
1	chicken.PL.OBL-ERG	M-steal.IPFV-1EVT

‘Je vole des poussins’

(6)* *du w-ilʔ-aˀd*
 1 M-steal.IPFV-1EVT
 ‘Je vole des poussins’

These properties align with properties of antipassives crosslinguistically (Polinsky 2013). Importantly, they argue against an analysis of the inverted construction in terms of (A-)lability since other (P-)labile verbs in the language do not show any of these restrictions.

Finally, no restriction on word order has been noted in the inverted construction compared to the ergative construction, in particular P can be separated from the verb by A (7) and/or an adverb.

(7) *hincba-li durħaˀ uk-un*
 apple.PL.OBL-ERG boy (M)eat.IPFV-PRET(3)
 ‘Le garçon mangeait des pommes.’

The P argument in the inverted construction is also free to be modified by adjectives and relative clauses (8); an analysis in terms of verb incorporation would be at pains to explain such examples.

(8) *du dila uc:i-li česa-d-aˀq-ib-ce hincba-li uk-ad*
 1 1.GEN brother-ERG pick-PRET-ATR apple.PL.OBL-ERG (M)eat.IPFV-1EVT
 ‘I will eat the apples that my brother picked.’

The talk will describe further properties of this construction: ban on ergative gap in relative clause using the inverted construction, more restrictions on ergative Ps, etc.

Extending a proposal made in Laka 2006 and Gagliardi et al. 2014, we propose that the inverted construction is an intransitive construction with the A argument in the nominative case and controlling agreement on the verb, while the P argument in the ergative case is in fact an adjunct. The restrictions on aspect and the P-argument are analyzed as stemming from an optionally inserted case-licensing head which comes with a plurality requirement.

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GS Multimodality

Integrating Multimodal Depiction into (Cross-)Linguistic Research: A corpus-based comparison of enactment in LSFb and Belgian French

Sébastien Vandenitte
(University of Jyväskylä)

Keywords: enactment, depiction, signed languages, gesture, comparative semiotics

Enactment, the use of one's body to depict a referent from an internal perspective, has been shown to be a prominent and multifunctional tool in signed languages (Cormier et al. 2015, Jantunen 2022). In spoken languages too, the use of so-called 'character viewpoint' iconic gestures has been documented in different meaning-making areas such as quotation and/or the narrative genre (McNeill 1992, Stec et al. 2016). Thanks to the multimodal turn in linguistics, more attention is now drawn to these crucial aspects of human languaging (Ferrara & Hodge 2018, Kendon 2008, Vigliocco et al. 2014). While there is a tradition of asking how the use of enactment compares across signed and spoken languages (Liddell & Metzger 1998), it is only recently that the emergence of directly comparable datasets has enabled reliable, quantitative comparisons of the phenomenon (Hodge et al. 2019, Parisot & Saunders 2022, Hodge et al. 2023). The present paper contributes to this endeavour by reporting on a cross-linguistic study of enactment in LSFb (French Belgian Sign Language) and in its ambient spoken language, Belgian French. Exploiting annotations carried out in a subset of the LSFb and FRAPé corpora (Lepeut et al. forthcoming), the use of enactment is analysed in the discourse of 10 LSFb signers and 10 Belgian French speakers performing two same language tasks, i.e., a conversational task about language attitudes and a narrative retelling task. The study specifically focuses on two dimensions of the phenomenon: the frequency of enactment and the use of multiple bodily and/or vocal articulators to enact referents. Using a combination of confirmatory and exploratory methods, the study shows that LSFb signers enact referents more frequently than Belgian French speakers do but also that partly different articulatory signatures are used to perform enactment in these two language groups. Potential explanations for identified differences are explored in the presentation.

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Multimodal information structure in physiotherapy: The informational configuration of touch and talk

Heike Ortner
(University of Innsbruck)

Keywords: multimodal interaction analysis, physiotherapy, touch, information structure, indexicality

From a linguistic perspective, physical therapy sessions are very complex social interactions: Therapists use a variety of multimodal means, including verbal instructions and explanations, mimic and gestural cues, task- or relationship-oriented gaze behaviour, and tactile feedback in the form of touch. Conversely, the patients constantly provide verbal and bodily feedback (cf. Bähr 2016, Fofana 2020, Parry 2005). While touch is the focus of the therapy, it is not always coordinated with the verbal part of talk-in-interaction (in the sense of Mondada 2013, 2019). The profile of touch as a multimodal resource is potentially autonomous yet contextually integrable in a multimodal ensemble (cf. Cekaite & Mondada 2021). There are frequent instances where the therapists or the patients involve touch acts in the information structure of a verbal utterance, for example by using touch as indexing the *comment* (cf. Krifka 2008) to a verbally introduced *topic*.

This talk is dedicated to this type of ‘multimodal information structure,’ following notions of information structure going beyond the verbal tier (cf. Keevallik 2018, Lehečková et al. 2022). The data consist of ca. 500 minutes of videotaped therapy sessions in two clinics for neuro-rehabilitation, recorded in 2018 and 2023. The research questions are as follows:

1. What is the significance of touch considering information structure in the specific setting of physical therapy sessions? What are its functions in a multimodal view of *focus-background*, *givenness*, and *topic-comment*?
2. How do these configurations differ from other multimodal connections of touch and speech in embodied interaction?

Given the diverse and inconsistent state of research on information structure, it is essential to illuminate the theoretical framework first. It borrows basic and established notions from Chafe (1976), Krifka (2008), Götze et al. (2009), and Song (2017). Focus-background, given-new, and topic-comment are distinct yet related concepts that can all be applied to the touch-talk-interface. The framework picks up insights from a multimodal view of Construction Grammar (Schoonjans 2018). The relation between information structure and indexicality (cf. Stukenbrock 2015) is also discussed briefly. The methodological approach encompasses three steps:

1. the delineation, identification, and classification of the formal and functional characteristics of touch in physiotherapy-specific formations (Kendon 2004, Mondada 2013) (this is part of a research project with a different objective based on the same data)
2. the identification and transcription of coordinated instances of touch and talk
3. the analysis of these instances concerning the informational structure and recurring patterns.

The results indicate the frequent coordination of verbal utterances and touch whenever the therapist gives instructions or explanations about muscular functionalities but also two disjunct tiers, especially in ‘silent’ sequences, only to be re-coordinated in the ‘flow’ of therapy. The therapists use touch to focalize the attention on certain bodily sensations that are associated with movements and failures to execute instructions. Touch is pivotal in the interactional production of knowledge in physical therapy,

and the multimodal information structure facilitates this process. At the same time, further functions such as building the therapeutic relationship can be applied and co-constructed simultaneously or consecutively.

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The sound of hand: Cross-modal associations between sound, gesture and meaning

Niklas Erben Johansson & Ian Joo
(Lund University & Otaru University of Commerce)

Keywords: iconicity, multi-modality, spoken language, gesture, word formation

From the point when we began to live our lives standing on our feet, both in the evolutionary history of our species and in our infancy, our hands have gone from being primarily used for movement to performing a vast range of other tasks. By extension, our freed-up hands have become our main vehicle for gesturing and signing sign languages. Manual gesturing occurs alongside spoken language and is an expedient strategy for bridging communicative gaps between speakers who do not share any common language. Similarly, iconicity, the resemblance-based mapping between aspects of form and aspects of meaning (Winter & Perlman, 2021), can aid our communication by concatenating several modalities. Cross-linguistically, many bird names are iconic, such as cuckoo which mimics the call of the bird it refers to, but iconicity is also common in words that refer to shapes. For example, basic shape concepts such as 'round' and 'pointy' have been linked to words with distinctive sound contrasts (Styles & Gawne, 2017), e.g. /buba/ and /kiki/.

It is commonly known that iconicity affects word formation (Sidhu et al., 2021), but since language is in a perpetual state of change, it is difficult to know exactly how iconic sounds find their way into iconic meanings. Thus, this study investigates iconicity in the intersection between spoken language, gesture and culture by studying associations between handshapes, speech sounds and people's judgment of these speech sounds. This is achieved by analyzing a) handshape words from languages representing 159 language families and quantifying the prevalence iconic speech sounds, b) handshape words throughout the Indo-European language family to examine the diachronic development of iconic speech sounds, and c) data collected through cross-modal experiments which explores whether visually presented handshapes can evoke iconic and/or affective associations to specific speech sounds.

The results showed associations between rounded vowels and words for 'fist', low vowels and words for 'palm', and high back vowels and words for 'finger', further supported by similar patterns found in our cross-linguistic sample of names representing the rock-paper-scissors game. These findings contribute to our understanding of how vocal iconicity is used for creating labels for communicative signs (Perniss & Vigliocco, 2014) and how it can be further linked to other sections of the human communicative system, i.e. to phonesthetics, associations between sound and gesture, and between sound and facial expressions. By aggregating lexical, cultural-historical, and cross-modal perspectives, this study will help explain how cognitive constraints impact language and culture and is relevant for psycho-cognitive and historical linguistics, as well as for culture studies.

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Cross-modal perspectives on grammaticalization: Aspect markers in creoles and sign languages

Nick Palfreyman, Luigi Lerosé, Julius Jakob, Lilith Stein & Susanne Maria Michaelis
(UCLan, UCLan, Leipzig University, Leipzig University, Leipzig University & MPI-EVA)

Morphosyntax, grammaticalization, language change, creole languages, sign languages

Since the 1970s, researchers such as Woodward (1973), Adone (2012) and Bakker (2015) have drawn attention to apparent similarities between sign languages (SLs) and creole languages (CLs). Such claims are often based on observations of a few languages per type, without a systematic comparison based on data from a large sample of languages to prove or disprove these claims empirically.

Meanwhile, large-scale typological studies on grammaticalization have barely included CLs, and SLs are absent entirely (Bisang & Malchukov 2020, Narrog & Heine 2018): consequently, the current state of the art on grammaticalization is incomplete and in need of substantial additional evidence from CLs and SLs.

This paper reports on a cross-modal project on grammaticalization by a mixed deaf/hearing research team that addresses this gap. We aim to produce a systematic comparative analysis of CLs and SLs for processes of grammaticalization in the domain of aspect by comparing substantial amounts of data on creole languages and sign languages systematically in the context of the world's languages.

A widespread claim in creole studies is that CLs are analytic or isolating languages lacking inflectional markers as opposed to their synthetic inflectional marking lexifier languages (McWhorter 1998, 2005, Velupillai 2015, Bakker et al. 2017). Similar claims are made for SLs (Schembri et al. 2018). In line with such claims, and given potential similarities between CLs and SLs, one can hypothesize that in the domain of aspect, too, CLs and SLs show more instances of early-stage grammaticalization (auxiliaries, free morphemes) than non-creole spoken languages, and fewer examples of late-stage grammaticalization (affixes, stem change).

Here we investigate two grammaticalization parameters (Lehmann 2015, Bisang & Malchukov 2020): (i) Phonetic reduction and (ii) bondedness (syntagmatic cohesion). Example (1) comes from Haitian Creole.

(1) Haitian Creole (French-based; Fattier 2013)

N ap manje.
1PL IPFV eat
'We are eating.'

Here the preposed imperfective aspect marker *ap* has been reduced significantly from its French source construction (*i)l est après de faire* 'he is at doing something'. Moreover, in terms of bondedness, nothing can intervene between the imperfective marker *ap* and the verb (Maurer et al. 2013). Therefore, irrespectively of the representation through the spelling, *ap* can be analyzed as an affix of the verb *manje* and could be written as *ap-manje* IPFV-eat.

In SLs, too, there are various processes of phonetic reduction, such as the reduction from two-handed to one-handed signs, or through transferring movement to a more distal joint reducing articulatory effort ('distalisation', Napoli et al. 2014). Completive markers may become bonded and cliticized to a host through various processes, here for instance in example (2), through a hold by the non-dominant hand (in orange circle) of the action root MEET.

(2) BISINDO (Indonesian Sign Language)



'(We) have already met.'

'(We) have already met.'

Both creole and sign language examples represent reduced strongly bonded aspect markers with their verbal/action root host. Such examples therefore call into question the hypothesis that CLs and SLs only show early-stage grammatical morphemes, such as auxiliaries and free morphemes.

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GS Language learning

Are dispreferred sound sequences learnt better when they predictably indicate morphotactic structure?

Irene Böhm, Kenny Smith & Nikolaus Ritt

(University of Vienna, University of Edinburgh & University of Vienna)

Keywords: phonotactics, consonant clusters, artificial language learning experiment, morphotactic ambiguity

Our paper reports two artificial language learning experiments focusing on coda consonant clusters, in which we explore the learnability of phonologically dispreferred sound sequences in terms of their ability to signal morphological structure.

Speakers are sensitive to the statistical distributions of phonotactic patterns in the lexicon, and use them as cues in the identification of both simple and complex word forms. Word shapes that conform to frequent and probable patterns are learnt, recognised, and articulated both more rapidly and with greater accuracy (Storkel 2001, Goldrick and Larson 2008, Kelley and Tucker 2017). Moreover, complex word forms whose phonotactic shapes correlate with (and therefore indicate) morphotactic structure (e.g., /-gz/ occurs only in complex forms like *egg+s*) are processed more quickly than ambiguous ones (Post et al. 2008, Korecky-Kröll et al. 2014). This suggests that speakers prefer to learn and use phonotactic shapes that indicate morphological structure unambiguously, and test this hypothesis in a study of coda consonant clusters.

Coda consonant clusters particularly lend themselves for this investigation: They are prosodically weak, typologically rare, historically unstable, and acquired late (e.g., Clements and Keyser 1983, Maddieson 2013, Lutz 1988, Jarosz, Calamaro and Zentz 2017). In languages that do allow complex coda clusters, they often result from suffixation (e.g., *fif+th*, *strength+s*). Being phonologically dispreferred and therefore rare within morphemes, they can function as highly noticeable signals of morphological complexity. They therefore lend themselves well for testing hypotheses about morphotactically indicative word shapes. For example, two conflicting views on the diachronic stability of clusters that are morphotactically ambiguous (e.g., /-nd/ in *hand* and *sinn+ed*) have been proposed (Dressler and Dziubalska-Kotaczyk 2006, Baumann, Prömer and Ritt 2019).

Therefore, we investigate how well participants learn words ending in dispreferred consonant clusters in two artificial grammar learning experiments (see e.g. Hudson Kam and Newport 2005, Culbertson 2012). First, we compare the learnability of clusters in simple vs. complex word forms. Participants learn eight nouns that end in /-tk/ either (1) in a suffix-less singular (e.g., *tmitk* 'thing' – *tmit.k+i* 'things') or (2) as a result of plural suffixation (e.g., *tmit* 'thing' – *tmit+k* 'things'). Second, we investigate morphotactic ambiguity and explore if clusters that predictably indicate morphotactic structure are learned better than ambivalent ones. We present participants with phrases (e.g., *matk tmit* 'green thing') that consist of four morphologically simple modifiers (e.g., *matk* 'green') and four nouns that can occur in unmarked singulars and suffixed plurals (e.g., *tmit* 'thing' – *tmit+k* 'things'). In one experimental condition (A), the same coda types (e.g. /tk/) can occur in both simple and complex word forms. In the other (B), some coda types indicate complexity unambiguously. Both experiments are conducted with 100 German native speakers between 20 and 30 years old, and the effect of morphotactic position on cluster learnability is analysed in a mixed logistic regression model.

On the basis of our pilot with thirty participants, we expect that participants learn the clusters better if they occur in morphologically complex than simple word forms (experiment 1), and if they are unambiguous exponents of morphological complexity (experiment 2).

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Native and non-native perceptions of Norwegian accents: A Principle Component Analysis

Kamil Malarski, Magdalena Wrembel, Kamil Kaźmierski & Witośław Awedyk

(Adam Mickiewicz University, Adam Mickiewicz University, Adam Mickiewicz University & University of Szczecin)

Accents in Norway tend to be stratified socially (Johnsen 2015), in spite of a generally wide acceptance and inclusivity for the use of regional dialects. For instance, the Western Oslo accents are perceived as more prestigious than the working-class or multicultural Oslo accents (Svendsen and Røynealand 2008), or accents in Northern Norway (Sollid 2014). Research on language attitudes to Norwegian accents has been rather limited to date (e.g. Gulbrandsen 1977, Lund 2006), and we still lack a more holistic perspective accounting for a broader range of raters, involving multilingual learners of Norwegian.

An online accent perception study was administered in Qualtrics. The listeners were supposed to rate fourteen samples of read speech (*Nordavinden og sola*), which included ten samples from five regions in Norway: Tromsø, Trondheim, Stavanger, Kristiansand, and Oslo (from the NTNU accent database), as well as four non-native accents of Norwegian recorded for control. The respondents were asked to listen to each sample and evaluate it according to the perceived level of education, intelligence, nativeness, pleasantness, friendliness, self-confidence and prestige on a 7-point Likert scale. To tap into native and non-native perception of Norwegian accents, the study involved three different rater groups: a) Native speakers of Norwegian, b) Polish migrants to Norway speaking Norwegian, c) Polish learners of L3 Norwegian living abroad, totalling 108 respondents.

We performed a Principle Component Analysis (cf. Grondelaers et al. 2019) on the ratings results, which identified three relevant components. The components were then entered as response variables into mixed-effects linear regression models, with accent, rater group, and their interaction as fixed effects (and with a by-participant random intercept). Component 1 related to the overall positive impression of a given accent. Among the native accents, the highest overall positive evaluation was attested for one Oslo accent, for all three groups of raters. For the second Oslo accent, and particularly for Trondheim, formal learners seem to have a more positive perception of them than naturalistic learners or Norwegian controls do (Figure 1). Component 2 captured the dichotomy between warmth (“friendly” and “pleasant”) and prestige (“intelligent”, “educated”, “prestigious”): the higher in the warmth scales, the lower on the prestige the accents were evaluated (e.g. the Tromsø accents). Component 3 had a strong positive correlation with perceived self-confidence. The Mandal accent, and one Stavanger accent were found to be perceived as sounding particularly self-confident.

The results show that native accents of Norwegian are viewed much more positively than the non-native ones by all groups of respondents. The Two Oslo accents were rated highest on the positive traits. The higher any accent scores in friendliness and pleasantness, the less prestigious it is evaluated. The differences between the three groups of speakers are high, however, which may indicate that exposure and the metalinguistic knowledge allowing one to identify the accent play a significant role in the evaluation of Norwegian accents by the three groups of respondents.

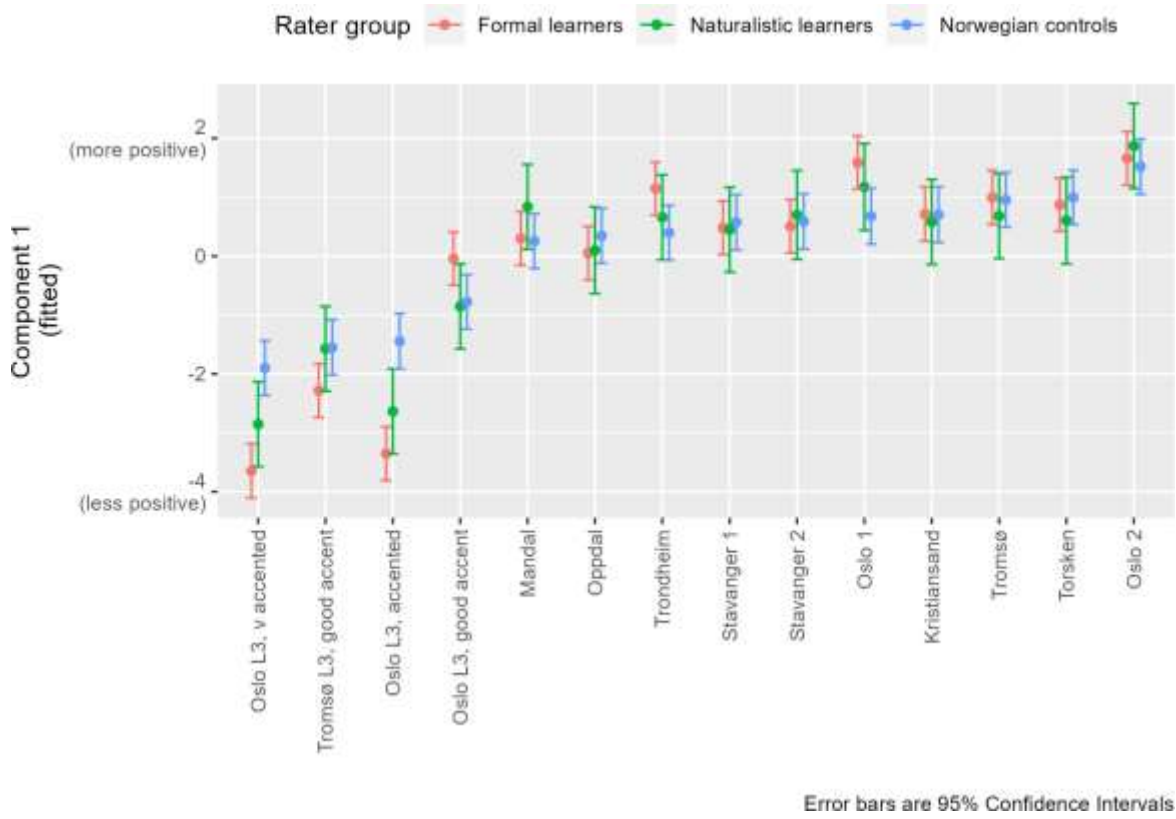


Fig. 1. Predictions of mixed-effects linear regression of Component 1.

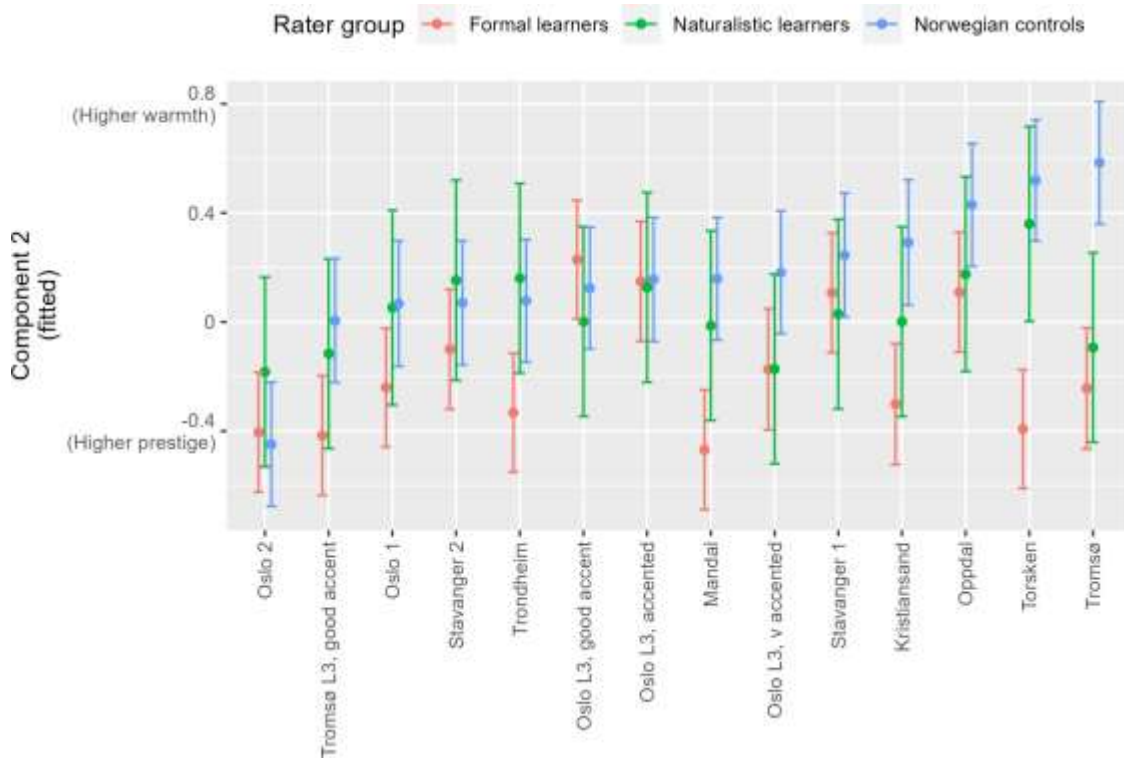


Fig. 2. Predictions of mixed-effects linear regression of Component 2.

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Fluency measures in multilingual speech: Task and language effects

Jolanta Sypiańska, Magdalena Wrembel & Angelika Walczak

(Adam Mickiewicz University, Adam Mickiewicz University & Adam Mickiewicz University)

Numerous temporal correlates of fluency have been put forward to account for native and non-native fluency (e.g., Gut 2009). Language effects have been found particularly for mean length of run and speech rate, i.e., syllables per second (Deschamps 1980; Dumont, 2018; Götz, 2013; Kahng, 2014; Raupach 1980) with overall less pausing in the L1 than L2. Varied results have been described for measures relating to pauses; either percentage of silent pauses (Raupach 1980) or duration of pauses (Deschamps 1980). On the other hand, task effects have consistently been shown with rate of speech and mean length of run which can even be twice as high in reading passages compared to spontaneous speech. There is also an indication that the language effect may even be more robust in text reading (Cucchiariini et al. 2002).

However, limited studies to date have investigated fluency in multilingual speech, except Peltonen and Lintunen (2022) who found minor cross-linguistic differences between the three languages of Finnish-Swedish bilinguals with English as an L3. They concluded that level of proficiency is mostly responsible for the differences in fluency with relatively little variation at more advanced levels.

To bridge this gap, the present study aims to explore language and task effects in fluency measures across three languages of multilingual speakers. The participants included 26 L1 Polish, L2 English, L3 Norwegian speakers with various L2/L3 levels. The data elicitation procedure was divided into three language blocks. In each block, the speakers performed two tasks: text reading of *The North Wind and The Sun* and extemporaneous speech regarding general topics, separately in Polish, English and Norwegian. Excerpts of ca. 20sec were extracted for each task and language (2 tasks x 3 languages x 26 participants = 156 excerpts). The recordings took place in a quiet room with professional recording equipment.

In the analysis, the data was forced aligned with the use of BAS Webservice (Kisler et al. 2017) and corrected manually by two phoneticians. Segment and pause durations were extracted by means of a PRAAT script. Pauses included both filled and unfilled pausal segments. The following fluency measures were taken into consideration: mean length of run, speech rate (number of phonemes per second), mean duration of pauses, pause to speech ratio (in percentage) and number of pauses per second. A linear regression was run to investigate language and task effects on the fluency measures. As expected, we found a statistically significant language effect ($\beta=36,689$, $p<0,0001$) with mean duration of pauses and pause to speech ratio increasing with language status (L1<L2<L3). In L3 Norwegian, mean length of run was the longest and there were fewer pauses per second than in L1 Polish and L2 English which suggests a different type of (dis)fluency profile in the L3 when compared to the other languages in the speakers' repertoire. There was also a statistically significant effect of task ($\beta=18,143$, $p<0,0001$) with predictably higher results for all fluency measures in the text reading task rather than extemporaneous speech.

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Sounding accented in L2 and L3: Foreign accentedness and comprehensibility ratings in two non-native languages

Magdalena Wrembel, Hanna Kędzierska & Krzysztof Hwaszcz
(Adam Mickiewicz University, Adam Mickiewicz University & Adam Mickiewicz University)

Foreign language acquisition research has mostly investigated the perception of accentedness in one of non-native languages, i.e., L2 or L3, (e.g., Munro & Derwing 1994, Lloyd-Smith 2021, Wesolek et al. 2023, Wrembel et al. 2023), however, there is a dearth of studies exploring two non-native languages in the same multilingual population. In this contribution, we investigate perceived accentedness, comprehensibility and ability to identify the speakers' native language in L2 English and L3 Norwegian speech samples of two groups of L1 Polish speakers. Specifically, we aim to explore the role of grammatical errors (present vs. absent), speaking mode (read vs. extemporaneous) and the type of exposure (naturalistic vs. instructed setting) on perceived global accent in L2 and L3.

L1 Polish speakers (mean age=28.6, AoAEN=8.4, AoANOR=23.7) were recorded reading the text "The North Wind and the Sun" and retelling a picture story (MAIN; Gagarina et al. 2019) in English and Norwegian. The procedure was conducted in two separate language blocks in two different settings (1) instructed - amongst students of Norwegian studies at a Polish university, (2) naturalistic - amongst Polish speakers residing in Norway. The speakers also performed Norwegian and English proficiency tests and completed the Language History Questionnaire (Li et al. 2020). Twenty speakers (10 instructed and 10 naturalistic learners) were selected out of a larger pool. A set of sentence-long speech samples (approximately 10 secs each) were extracted from the recordings for the two tasks in L2 English and L3 Norwegian and normalized for loudness. The stimuli for each language block included: 20 read sentences, 20 grammatically correct spoken sentences and 20 ungrammatical spoken sentences. Additionally, read and spoken samples of 10 control participants were included featuring 5 natives and 5 non-natives with different L1 backgrounds. The experiment was conducted in the form of two online surveys at Qualtrics, separately for 40 native speakers of Norwegian and of English who rated 80 pseudorandomized samples for perceived accentedness and comprehensibility on a 9-point scale as well as identified the speakers' first language.

The results revealed a statistically significant main effect of learning setting, with naturalistic learners perceived as significantly less accented compared to instructed learners ($F(1) = 22.1, p < .001$). While no statistically significant effects associated with speaking mode were observed, a trend suggests that participants were judged as most accented in erroneous speech ($M = 6.77$), less so in read speech ($M = 6.54$), and least in correct speech ($M = 6.46$). Furthermore, in both Norwegian and English, instructed learners were more frequently identified as Slavic (i.e., Polish, Ukrainian, Russian) compared to naturalistic learners. The latter group also tended to rely more on their L2 English while speaking L3 Norwegian, as well as on their L3 Norwegian while speaking English. Further, the effects of L2/L3 proficiency levels on the perception of foreign accentedness and comprehensibility of speech, as well as correlations between the two parameters were investigated.

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Do Children Prefer Nouns over Verbs During Early Language Development?

Hardegger Selma, Mazara Jekaterina & Stoll Sabine
(University of Zurich, University of Zurich & University of Zurich)

Keywords: language development; lexical acquisition; morphological structure; cross-linguistic; longitudinal corpus study

Despite considerable structural differences in the world's languages as well as differences in child-rearing practices, children across the world are remarkably similar in the time frame of lexical acquisition. This is due to the children's reliance on multiple cognitive skills like individuation, generalization, symbol recognition, object and event representation, etc. One such mechanism, demonstrated across several studies and languages (e.g., Gentner 1982), is claimed to universally favor nouns over predicates in early acquisition due to nouns' conceptual salience facilitating concept-label-mapping. While this provides important insights about universal cognitive mechanisms underlying lexical acquisition, many studies are methodologically inadequate at capturing language-specific effects, e.g., rich morphology, different input distributions (Fortesque 1985, Stoll et al. 2012, Casillas et al. 2024). Frequency was proposed as an alternative explanation for a particular N/V-preference (e.g. Choi & Gopnik 1995 in Korean, Tardif 1996 in Mandarin). Few studies, however, examine interactions between the composition of early vocabulary and language structure and morphological complexity of nouns and verbs, children's productivity, and input distributions.

In this paper, we present a longitudinal study examining the use of nouns and verbs by adults and children between the ages of 1 and 3 in 10 languages: Chintang (Sino-Tibetan), English, Japanese, KuWaru (Finisterre-Huon), Nungon (Chimbu-Wahgi), Qaqet (Baining), Russian, Sesotho (Bantu), Turkish, Yucatec (Mayan). We analyze the interaction between N/V-distributions in input and production and the development of morphological productivity measured as the ratio of the child's entropy of verb and noun forms divided adults' entropies within each recording. This allows us to estimate morphological productivity over time in a comparable context. Our hypothesis is that the development of N/V-ratios is moderated by the morphological complexity of the languages as well as input N/V-ratios. Children acquiring languages with complex verb morphology show more gradual morphological development (as measured by their slower approach to adult levels of entropy), which leads to a higher deviation of their N/V-ratio from that of surrounding speakers (Stoll et al. 2012). Children facing less challenging morphology start out with N/V-ratios closer to adults and show a smaller change over time.

We fitted generalized linear mixed effect regression models evaluating the effect of entropy ratio of verb and noun forms, N/V-ratio in input, age, and language on children's N/V-ratios (with individual children as random effects). Models were fitted for both type and token distributions. We found a significant negative effect of verb form productivity on N/V-ratios (-0.6941 [-1.03, -0.36], $p < 0.001$), which outweighed the effect of age, as well as for the relative entropy of nouns (-0.4900 [- 0.84, -0.14] $p = 0.0061$). Adult N/V-ratios were found significant only in combination with verb but not noun form entropies. Our results suggest that the development of morphological proficiency affects N/V-ratios and more attention needs to be paid to language-specific features and distributions as well as child-rearing environment to properly assess the factors contributing to the preference for particular forms in early development.

Acknowledgments

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I see what you are trying to do. Siehst du, der kann schon Englisch.
Investigating metaphor use in German-English bilingual children

Nina Julich-Warpakowski & Antje Quick
(Uni Erfurt & Universität Leipzig)

How do children acquire metaphorical meaning? One assumption is that children learn the literal sense of an expression first and later on extend it metaphorically. Alternatively, children may learn metaphorical senses from contexts in which both a literal and a metaphorical meaning applies and only later learn to differentiate the two. In (1), for example, a father literally *sees* what his child is doing but he also metaphorically sees, i.e. *understands*, the purpose of the child's activity.

(1) *I see what you are trying to do but I won't let you.*

The metaphorical sense of *see* in terms of 'to understand' reflects the KNOWING IS SEEING conceptual metaphor which is motivated by a correlation in experience – seeing is a means of understanding (Lakoff & Johnson, 1980, Grady, 1997). In this project, we aim to investigate a) when do children start to use *see* to mean *know* (or *understand*, *realise*), and b) which role does the input from their caregivers play? Research has shown that conflated uses like (1) are very frequent in adult speech directed at children, and that children start to produce conflated uses themselves before they first use purely metaphorical uses of *see* (Johnson, 1999). While previous research has mainly focused on monolingual children, we are also interested in whether, in bilingual contexts, (metaphorical) input from one language may influence the (metaphorical) output in the other language.

We explore these questions using data from two highly dense corpora of 2 German-English bilingual children (corpus of child 1: age = 2;3 to 3;11, 47,812 child utterances, 180,293 caregiver utterances; corpus of child 2: age = 2;3 to 3;9, 37,995 child utterances, and 193,993 caregiver utterances). For the analysis, we coded every instance of the verb *see* (and German *sehen*) for whether it was used in a literal, metaphorical, or conflated sense. We also annotated the grammatical construction in which the instance occurred assuming that different uses are tied to different constructional patterns in the two languages. We annotated the children's output as well as the input from their caregivers.

Our research is in progress but preliminary results show that caregivers use *see/sehen* in a partly figurative way in 50% of their utterances, most of which indeed also allow for a visual interpretation as in (1). The children, however, exclusively use *see/sehen* literally. While the literal uses of *see/sehen* are primarily realized by a *see + NP* pattern, where NP is a visible entity, most conflated and metaphorical instances are realized by a *see + clause* pattern, as in (1). Thus, a potential reason for the absence of figurative uses in the children's output, apart from their increased abstractness, may also be the fact that figurative uses of *see/sehen* tend to occur in syntactically more complex constructions, as in (1), which are harder to master for the child.

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The syntactic development of cleft sentences in L1 French

Tess Wensink, Karen Lahousse, Cécile de Cat, Katerina Palasis & Béatrice Busson
(KU Leuven, KU Leuven, University of Leeds, Université Côte d'Azur & KU Leuven)

Keywords: cleft sentences, syntax, information structure, acquisition, French

Although the literature on the syntax and information structure of *c'est*-clefts in adult French (1) is extensive, little is known about their acquisition. Only three small-scaled studies focused on *c'est*-clefts in child French (De Cat 2007, Jourdain 2022, and Lahousse and Jourdain 2023). The aim of this talk is to analyze the development of these clefts on the basis of a large dataset of spontaneous speech. We will show that the observed developmental pattern sheds light on the early development of the syntactic tree and allows to distinguish between two competing hypotheses.

- (1) *C'est moi qui lis.*
it is me who reads
'It is me who reads.'

We will base our argumentation on a structural derivation in which the clefted element (*moi* in (1)) moves to a focus-position in the higher part of the CP of the embedded clause, whereas the relativizer (*qui* in (1)) occupies a lower position to the right of this focus-position (2) (Belletti 2012, 2013, and Haegeman 2015).

- (2) *c'est* [_{CP} [_{FocP} *moi* [_{FinP} *qui* <*moi*> *lis*]]]
it is me who reads

Method

Our corpus analysis is based on:

- 593 clefts produced by 16 children (ages 2-6) from corpus Palasis (2009);
- 290 clefts produced by three children (ages 1-4) from the York corpus (De Cat 2007);

Results

Our study reaffirms the developmental pattern found by Lahousse and Jourdain (2023): children successively produce clefts consisting of *c'est X*

1. without cleft relative clause (CRC) (adultlike "reduced clefts") (3),
2. with CRC attempt (non-adultlike) [without relativizer, without subject pronoun] (4),
3. with juxtaposed sentence (adultlike in informal French) [without relativizer, with subject pronoun] (5),
4. with a (non-adultlike) juxtaposed sentence [with complementizer, with subject pronoun] (6),
5. with an (adultlike) CRC [with relativizer, without subject pronoun] (1).

- (3) Reduced cleft without CRC:

Ah c'est toi !
it is you
'It is you!'

(Noémie, 2;11, corpus Palasis)

- (4) Cleft involving a CRC attempt [without relativizer, without subject pronoun]:

C'est moi le prends.

it is me it takes

'It is me who takes it.'

(Emma, 3;2, corpus Palasis)

- (5) Cleft involving a juxtaposed sentence [without relativizer, with subject pronoun]:

C'est lui_i il_i a gagné.

it is him he has won

'It is him who won.'

(Romane, 4;3, corpus Palasis)

- (6) Cleft involving a juxtaposed sentence [with complementizer, with subject pronoun]:

C'est ma maman_i qu' elle_i l' a achetée.

it is my mother that she it has bought

'It is my mother who bought it.'

(Célia, 4;1, corpus Palasis)

If the derivation in (2) is correct, the finding that children first produce clefts involving a CRC attempt (4) and clefts involving a juxtaposed sentence (5), both without relativizer, before they produce full adult-like clefts with relativizer (1) implies that children develop the higher part of the CP, to which the clefted element moves, before the lower part of the CP, which involves the relativizer. Hence, our study suggests that both the higher part of the CP and the TP are acquired before the lower part of the CP. In addition, children correctly inflect the verb in the majority of the cases, which suggests that they also acquire the TP before the lower part of the CP. This contrasts with the Growing Trees Hypothesis, according to which syntactic structure is acquired in a bottom-up manner: children first acquire the TP, then the lower part of the CP, and finally the entire CP (Friedmann et al. 2021). Instead, our analysis supports the idea of inward-growing maturation, proposed by Heim and Wiltschko (2021) amongst others: the outer layers of the tree (i.e., the vP/TP and the higher part of the CP) are acquired before the inner layers (i.e., the lower part of the CP).

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Influence of self-paced reading methodologies on sensitivity to violations

Anna Skatba, Sylwiusz Żychliński & Magdalena Wrembel
(Adam Mickiewicz University & Adam Mickiewicz University)

Keywords: multilingualism, online processing, self-paced reading, online methods, offline methods

Although research into multilingualism and third language (L3) acquisition has recently attracted much attention, some aspects still remain relatively under-researched, including cognitive processes underlying online processing of syntax (e.g., Jarvis and Pavlenko 2008, Sokolova and Slabakova 2019, or Długosz 2023), or the role of methodological choices regarding the use of online and offline methods in one study. Therefore, in this contribution we address the role of methodology in the processing of correct and incorrect sentences in L3 Norwegian by Polish-English-Norwegian multilinguals. We will report two self-paced reading (SPR) studies, requiring participants either to judge the grammaticality of each sentence, or to read for comprehension only.

In the first SPR study we tested two constructions characterised by similarity between Norwegian and Polish (gender agreement, reflexive verbs) and other two similar between Norwegian and English (prepositional verbs and adjectives, articles). We presented L1 Polish – L2 English – L3 Norwegian trilinguals (N = 34) with 192 Norwegian sentences, which were displayed word-by-word on the computer screen. Each sentence was followed by a binary acceptability judgement question evaluating metalinguistic knowledge. We hypothesised that, within each construction analysed separately, critical (i.e., the word deciding about the grammatical correctness of a sentence) and spill-over (i.e., the following word) words in the grammatical condition would yield shorter reaction times than in the ungrammatical condition.

We analysed the data using a linear mixed-effects model, with log-transformed reaction times as the predictor variable, and grammaticality as fixed effects. The models, followed by post-hoc analyses, confirmed faster responses to the key word for gender agreement ($p < 0.001$) and reflexive verbs ($p < 0.001$), indicating facilitated processing of constructions similar between L1 and L3. However, neither of the English-like constructions yielded significant results.

In the second study, aimed at the same population of L3 Norwegian speakers, the self-paced reading and acceptability judgement tasks were administered separately. While gender agreement remained a representative of a Polish-like construction, reflexive possessive pronouns were now selected as an English-like construction. In the self-paced reading part, participants read Norwegian sentences (N = 96) for comprehension, and then they completed an offline questionnaire deciding whether the sentences are grammatically correct. We hypothesised that for both constructions the critical and spill-over words in the grammatical condition would be read faster than in the ungrammatical one. However, the hypothesis was only partially supported by the data, which showed a grammaticality effect on the critical word for pronouns ($p = .03$), but not for gender agreement.

In sum, the two SPR studies provided evidence for the significant role of the selected task on trilinguals' reading patterns, indicative of sensitivity to Polish-like constructions when asked to judge grammatical acceptability of each sentence, and to an English-like construction during reading for comprehension.

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Exploring the Role of Restructuring Verbs in Early Italian under the Growing Trees Hypothesis

Tommaso Sgrizzi
(IUSS Pavia)

Keywords: restructuring verbs, growing trees hypothesis, corpus study, control, language acquisition

The acquisition of clausal complements has received considerable attention in the literature over the past decades (Thornton and Crain 1994; Villiers et al. 1990; Guasti et al. 2008; Dudley et al. 2014, Hacquard and Lidz, 2022, a.o.). A fairly stable empirical result is that generally these structures appear quite late. Nonetheless, if we look closely at the acquisition of infinitival complements, a puzzling fact emerges. Bloom et al. (1984) already noticed that the first occurrences come even before the age of 2 but exclusively with *want*, *get*, *have*, and *go*. The question is why some infinitival complements seem easier than others, and why some control verbs would appear earlier than others.

Looking closely at these early infinitive-taking verbs, an interesting classification arises. They appear to be all restructuring verbs, namely verbs that despite selecting an infinitival complement, they give rise to what looks like a monoclausal structure (Rizzi 1976, Wurmbrand 2001). In an influential proposal, Cinque (2006) put forward the hypothesis that restructuring verbs are functional heads, akin to modals and auxiliaries, and that the monoclausal behavior of restructuring verbs directly follows from the fact that they do not constitute a case of complementation at all.

Under the Growing Trees Hypothesis (Friedmann et al. 2021, and data from 60 children aged 2;2-3;10 and 61 other children aged 1;6-6;1), syntactic development proceeds bottom-up via the subsequent availability of three distinct syntactic zones:

	INFINITIVAL COMPL.	RESTR. MATRIX VERBS	% REST. INFINITIVES	FINITE COMPLEMENTS
Cam	145	127	87.6%	57
Elisa	65	58	89.2%	39
Gregorio	2	2	100%	1
Guglielmo	101	81	82%	22
Raffaello	64	44	68%	15
Marco	32	20	62.5%	6
Davide	2	2	100.0%	0
Federica				0
Lorenzo	1	1	100.0%	1
Veronica	1	1	100.0%	0
Rosa	15	14	93.3%	10

Such an overwhelming result is fully expected under a functional approach to restructuring and the GTH, given the structural advantage offered by a monoclausal account that does not involve embedding. In light of extensive research highlighting the developmental challenges posed by defective structures - i.e., structures with intermediate layers missing (Belletti, 2021, Landau and Thornton, 2011; Santos et al., 2015), this result would be hardly explained under the competing biclausal approach to restructuring, which generally considers restructuring predicates lexical verbs having as a complement either a reduced VP (Rizzi 1976, Müller 2020, a.o.) or a full CP (Kayne 1991, Roberts 1997, a.o.). Other aspects will be discussed (e.g., lack of precedence, computational complexity, and the role of the prepositional complementizers).

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GS Psycholinguistics

Noun phrases in aphasia: A usage-based examination

Rachel Hatchard & Elena Lieven
(Manchester Metropolitan University & University of Manchester)

To fulfil their basic needs, humans need to communicate with others about objects, abstract concepts, people, places and situations. In typical language users, this fundamental act of reference is very commonly effected using noun phrases (NPs) (e.g. Serratrice & De Cat, 2020). What happens to this key linguistic device, however, when the language system is disrupted in some way, leaving the speaker less able to retrieve or assemble their utterances? This is the situation facing people with the most commonly acquired language disorder in adults: aphasia.

In line with the rule-based/componential view of language that remains dominant in aphasiology, research has studied individual NP components in aphasia, particularly nouns (e.g. Alyahya et al., 2018), pronouns (e.g. Arslan et al., 2021) and determiners (e.g. Nielsen et al., 2019). Very little work investigates whole NPs, as would be of interest in a usage-based approach; this proposes that whole-form storage and processing can occur beyond the word level, and also that NPs are built up and entrenched in the mind gradually, rather than abstract knowledge of NPs being innate. The usage-based perspective has brought wide-ranging insight to other language areas (e.g. child language; Ambridge & Lieven, 2011), but is only just gaining traction in aphasiology (e.g., Boye et al., 2018; Hatchard, 2015; 2021; Hatchard & Lieven, 2019; Martínez-Ferreiro et al., 2020). No existing work applies this approach to whole NPs in spontaneous speech in aphasia, but doing so could shed new light on this debilitating disorder, with potential implications for speech and language therapy, as well as helping to further test the usage-based approach, thereby also increasing understanding of typical language processes.

This study provides a usage-based examination of NPs, investigating how the following vary with spoken language capability in spoken Cinderella narratives from 12 people with various aphasia 'types'/ severities: percentage use of noun versus pronoun heads; NP elaboration (the number of components and component types in the phrases); NP productivity (the flexibility with which speakers can produce NPs with varying lexis); and any relative preservation of particular component types over others.

The analyses indicate that rather than differing categorically by aphasia 'type', the people with aphasia vary along a continuum, whereby with greater spoken language capability, there is increasing use of pronoun over noun heads, and greater NP elaboration and productivity, with less reliance on more frequent and likely 'fixed' NPs. Moreover, with more severe spoken language impairment, heads are the most preserved NP component (the speaker with the most restricted language only produced this element), followed by determiners and/then pre-modifiers, then post-modifiers. This ordering approximately mirrors the order of acquisition of NP components by children (see Eisenberg et al., 2008), supporting the usage-based view of NPs being built up and entrenched gradually.

The talk explains how these findings can be predicted in a usage-based account, extending support for this approach from the context of aphasia to the fundamental area of NPs. Results are discussed in relation to both the development of linguistic theory and clinical practice (speech and language therapy).

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Observing the birth of gender systems in an unlikely place: Possessive classifiers

Michael Franjeh, Alexandra Grandison & Greville G. Corbett
(University of Surrey, University of Surrey & University of Surrey)

Keywords: Grammatical gender, possessive classifiers, storyboards, Oceanic, experiments

Possessive classifier systems are known to be ‘relational’: they signal the interaction between the possessor and the referent:

Lewo (Vanuatu; fieldwork data)

- | | | | | | |
|-----|-------------------------|--------------|-----|-----------------------|--------------|
| 1a. | <i>m̃a-u</i> | <i>mrawa</i> | 1b. | <i>ka-u</i> | <i>mrawa</i> |
| | DRINK.CL-1SG | coconut | | FOOD.CL-1SG | coconut |
| | ‘my coconut (to drink)’ | | | ‘my coconut (to eat)’ | |

Use of (1a) is appropriate if the possessor intends to drink the coconut, while (1b) would indicate an intention to eat it. These systems are well attested in Oceanic languages. They seem an unlikely source for gender-like systems, in which nouns canonically have fixed assignment. Yet Franjeh (2016, 2018) observes that North Ambrym is moving towards a system in which, for example, *we* ‘water’ is fixed as DRINK, just as in French *eau* ‘water’ is fixed as FEMININE. How can this come about?

Gender is a familiar reference tracking device. Possessive classifiers can also function for reference tracking without a possessed noun, across long stretches of discourse. We ask therefore how similar our classifiers are to a gender system. We describe a storyboard experiment (c.f., Burton & Matthewson 2015) with speakers of six Oceanic languages, including Lewo and North Ambrym (with an inventory size of classifiers from three to over twenty). We designed eight four-picture storyboards (Figure 1); each picture shows a different interaction with a particular object. By investigating the use of classifiers as reference tracking devices, we reveal their similarity to gender systems and the route of development from relational classifiers to gender.



Figure 1: Storyboard with different interactions (*finding, carrying, roasting, selling*).

Hypothesis: in languages with relational classifier systems (like Lewo), participants will use different classifiers for the antecedent noun, according to the interactions shown in the images. In languages with a more fixed system (like North Ambrym) however, we expect the same classifier to be used to mark the antecedent across the whole storyboard, thus showing a fixed gender-like system.

Analysis of Variance (ANOVA) was conducted to compare responses across languages. The number of identical classifier responses in a storyboard differed significantly across languages. Pairwise comparisons of individual languages indicated that North Ambrym had a significantly higher number of identical classifiers used in a storyboard than all other languages.

Our analyses show that North Ambrym's system functions differently to the other languages in our sample, with the same classifier being used on average throughout a storyboard more than 90% of the time (Figure 2). The other languages in our sample retain typical relational classifier systems, whereas North Ambrym's system closely resembles a fixed gender-like system.

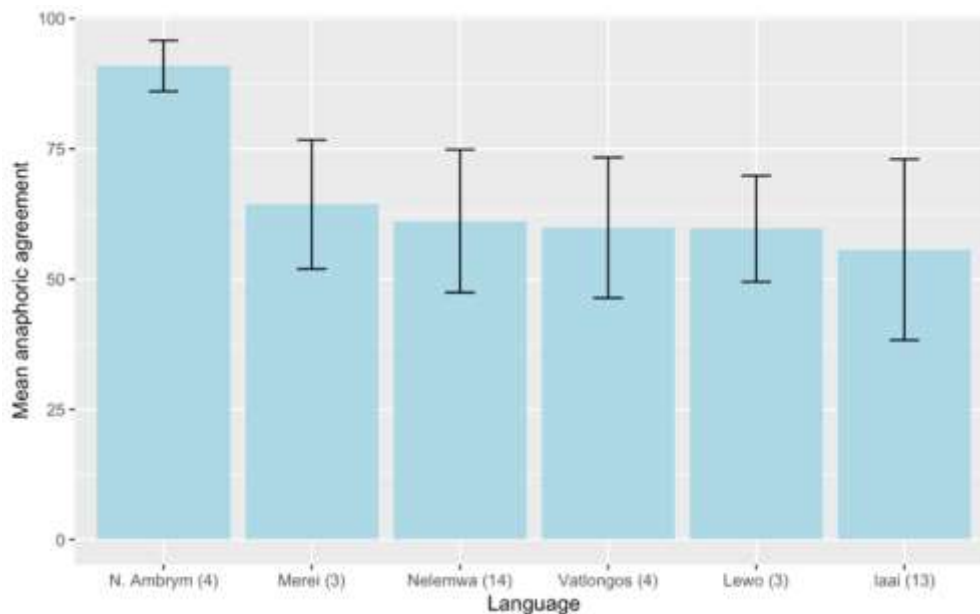


Figure 2: Mean anaphoric agreement for each sample language (total number of classifiers given across all participants for each language in brackets). Standard error bars show 95% confidence intervals.

Gender and classifiers were once thought of as disparate systems of categorisation but are now understood as belonging to a single typological space (Fedden & Corbett 2017). Our findings not only support a unified typology of nominal classification systems but provide critical evidence for the rise of agreement and gender systems from classifiers.

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Progressive aspect and goal phrases: Evidence from English and Norwegian

Yo Matsumoto & Mizuki Tanigawa
(NINJAL & University of Tokyo)

Keywords: progressive, aspect, goal, motion events, relativity

The relationship between motion-event descriptions and grammatical aspect is an interesting topic of study. Athanasopoulos and Bylund (2013) claim that English speakers tend to omit a goal more often than Swedish speakers (see von Stutterheim et al. 2012 for a similar observation). Athanasopoulos and Bylund attribute this difference to the presence of progressive form in English and its absence in Swedish, claiming that this is evidence for language relativity in that the system of grammatical aspect in a language affects motion event cognition of the speakers of the language.

To evaluate this claim, we examined the results of our video-based experiments with the speakers of English and Norwegian (which lacks the progressive in a way similar to Swedish). 23 speakers of English and 28 speakers of Norwegian participated in the experiment. We examined the responses to the nine motion scenes directed to a goal (e.g., a man runs to a bicycle) to see the tense/aspect forms used and the presence of a goal in responses.

The results showed that the two languages differ in the choice of tense/aspect but do not differ in the presence of a goal in responses. English speakers mostly used non-progressive forms (simple past: 54.2%, simple nonpast: 39.1%) and a small number of responses were in the non-past progressive form (6.7%). Norwegian speakers used non-past tense form (90.0%) and past tense form (10.0%). Most importantly, 94.2% and 94.4% of responses in English and Norwegian contained a goal, respectively, with the difference nonsignificant ($p=.897$) by Yates' correction formula, in contrast to the finding of Athanasopoulos and Bylund (2013). A close examination of English responses revealed an interesting fact: responses in the progressive form less often contained a goal ground (46.1% of responses) than those in nonprogressive forms (97.8%), with the difference significant at the $p<.001$ level (Yates' correction formula). Note that all English responses in Athanasopoulos and Bylund (2013: 294) were in the progressive form. All this suggests that the omission of a goal in English is true of motion-event descriptions in the progressive form but not of motion-event descriptions in general. Similar results from Quechua (data due to Yuko Morokuma) and Bengali (data due to Sakura Ishikawa and Kiyoko Eguchi) support this claim.

These findings show that a tendency to omit a goal is not a property of a language as a whole but of progressives. This makes sense since the progressive focuses on the unfolding of a process rather than the reaching of an endpoint. This further weakens the relativity argument made by Athanasopoulos and Bylund (2013), especially when the claim is made concerning the nature of a language as a whole.

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An experimental investigation of adjunct islands in Mandarin Chinese

Dawei Jin & Xu Ji

(Shanghai Jiao Tong University & City University of Hong Kong)

Keywords: <island effects, syntax, adjunct island, experimental syntax, overt movement>

Adjuncts are argued to constitute a strong island domain resistant to overt extraction (Ross 1967; Cattell 1976). The status of adjunct islands as a language universal has recently been subject to increased scrutiny. While the theoretical literature in Mandarin Chinese generally assumes with a position of adjunct island sensitivity (Huang 1982; Lin 2005; Ting & Huang 2008; Huang et al. 2009), recent experimental studies in Mandarin (Myers 2012; Zenker & Schwartz 2017) failed to observe an island effect. The present work revisits this empirical claim, in view of potential confounds in previous experiments involving the use of causal adjunct clauses in the design, which has been independently argued to be amenable to island circumvention due to semantic reasons: A single-event construal becomes available when the two actions depicted by the matrix and the adjunct clause are spatiotemporally overlapping and necessarily sharing the agent or bearing a causation relation to each other (e.g. Truswell 2007; Jin 2015). Our experiment based on (non-causal) temporal adjunct clauses finds a robust adjunct island effect in Mandarin Chinese, confirming previous theoretical predictions.

Acceptability Judgement Task: The experiment employed the factorial design established by Sprouse (2007) that is widely adopted in existing experimental studies of island effects across languages. The gist is to implement a 2*2 design, with EMBEDDING manipulating the dependency length (embedded vs. matrix) and STRUCTURE controlling for whether the embedded clause contained an adjunct or not (non-island vs. island). 4 sentences were created for each of the manipulations based on a Latin Square design. Table 1 presents one example set of our target stimuli. 127 participants rated the acceptability of 16 target stimuli and 32 fillers on a Likert scale from 1 (completely unnatural) to 7 (very natural).

Results: Both linear mixed-effects models (Estimate = -0.78, SE = 0.20, $t = -3.98$, $p = 0.001$) and cumulative link mixed models (Estimate = -3.04, SE = 0.67, $z = -4.53$, $p < 0.001$) revealed a significant EMBEDDED*STRUCTURE interaction. This two-way interaction shows that the island-violating condition receives lower ratings than is expected from the additive effects of the two manipulations of dependency length and embedding, which is indicative of an island violation.

Discussion: Our findings in Mandarin offer evidence that the adjunct island condition applies in Mandarin Chinese (e.g., Huang 1982; Lin 2005; Huang et al. 2009), adding support to the recent proposals according to which adjunction imposes a cross-linguistically robust locality constraint (Stepanov 2007; Sprouse and Hornstein 2013; Sprouse et al. 2021).

Table 1: Sample target stimuli across four conditions

Embedded [←] /Island [←]	Zhe-ge jiushi [fuwuyuan [zai guke chi t zhiqian] shang-le tianpin] de na-dao cai. [←] DEM-CLF is [waiter . . . [LOC customer eat before] serve-PRF dessert] REL DEM-CLF dish [←] 'This is the dish _i that [the waiter served dessert [before the customer ate t _i]].' [←]
Matrix/ [←] Island [←]	Zhe-ge jiushi [t [zai guke chi zhucai zhiqian] shang-le tianpin] de na-ming fuwuyuan. [←] DEM-CLF is [[LOC customer eat main.course before] serve-PRF dessert] REL DEM-CLF waiter [←] 'This is the waiter _i who[t _i served dessert [before the customer had the main course]].' [←]
Embedded/ [←] Non-island [←]	Zhe-ge jiushi [fuwuyuan guancha-dao [guke mei chi t] de na-dao cai]. [←] DEM-CLF is . . . [waiter . . . observe-RES [customer NEG.PRF eat] REL DEM-CLF dish [←] 'This is the dish _i that [the waiter observed [the customer did not eat t _i]].' [←]
Matrix/ [←] Non-island [←]	Zhe-ge jiushi [t guancha-dao [guke mei chi zhucai]] de na-ming fuwuyuan. [←] DEM-CLF is . . . [observe-RES [customer NEG.PRF eat main.course]] REL DEM-CLF waiter [←] 'This is the waiter that [t _i observed [the customer did not have the main course]].' [←]

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The effect of linguistic medium on metaphor directionality: Written standard Arabic versus oral colloquial Arabic

Jad Kiadan
(Tel-Aviv University)

Numerous scholars have demonstrated the existence of pervasive directionality in verbal metaphors, for example when comparing the two terms 'conscience' and 'compass', the preferred direction would be 'Conscience is a compass', while saying 'A compass in conscience' would be anomalous. Most of the theories in this field claim that the directionality of metaphors stems from the conceptual level (Lakoff & Johnson 1980, 1999), while recently, a few researchers have pointed to the critical influence of different grammatical structures on directionality (Shen & Porat 2017, Gil & Shen 2019). Such findings showing the significant impact of linguistic factors on metaphor directionality lead to the hypothesis that different linguistic modalities can affect metaphor directionality. In this study, we examined for the first time the effect of the linguistic medium on directionality, mainly focusing on modality (written vs. oral). The language chosen for the study was Arabic, which, because of its diglossic state, has one of the biggest differences between the two modalities in the daily life of its speakers. Two Arabic-speaking groups were asked to produce asymmetric similes using 32 metaphoric pairs: one group performed the task in written form using Modern Standard Arabic, and the other in oral form using Colloquial Palestinian Arabic, and then computing the percentage of the similes emitted in the preferred direction (directionality). The results showed a significant difference in directionality percentages between the two mediums favoring the written MSA, in accordance with our hypothesis. The findings are discussed with regard to metaphor directionality theory, as well as the effect of the linguistic medium.

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Dominant language effects on the translation of false friends by heritage language speakers

Roxana Ciolăneanu
(University of Lisbon)

Keywords: heritage speakers, dominant language effects, false friends, translation ambiguity, priming

In the multilingual and highly globalized society we currently live in, research on cultural and linguistic diversity is of utmost importance in better understanding both human interactions and the individual's positioning in the world. This paper is a first step in the attempt to analyse the interlingual dynamics that take place within the Romanian community in Portugal. The effects of Portuguese, the dominant language, will be analysed in relation to how *heritage language speakers* of Romanian process and translate three categories of false friends: *full semantic false friends*, *partial semantic false friends*, and *chance false friends* (Chamizo Domínguez & Nerlich, 2002; Al-Athwary, 2021).

Full semantic false friends are interlinguistic, formally very close lexical pairs sharing the same etymology, yet semantically far apart due to different semantic routes they took throughout history: e.g., ro. *lume*, 'world', pt. *lume*, 'fire'; ro. *câștiga*, 'win, gain', pt. *castigar*, 'punish'. *Partial semantic false friends* share not only the same etymology and form, but also some semantic representation: e.g., ro. *marmeladă*, 'jam', pt. *marmelada*, 'quince jam'; ro. *turmă*, 'group of animals/herd', pt. *turma*, 'group of students/class'. *Chance false friends* are formally similar but etymologically unrelated interlinguistic pairs: e.g., ro. *pernă*, 'pillow', pt. *perna*, 'leg'; ro. *pai*, 'straw', pt. *pai*, 'father'.

The methodology applied will follow various studies on *translation ambiguity* (Eddington & Tokowicz, 2012; Prior, Kroll and Macwhinney 2013 among others) and will be based on two main tasks: primed translation recognition task and a language history questionnaire. The participants' selection will balance *parental generation* and *heritage speaker generation* with the view to testing the dominant language effects on processing the three types of false friends according to age group and formal education exposure. We expect that *partial semantic false friends*, which largely correspond to what is called *meaning translation-ambiguous words* (Eddington & Tokowicz, 2012: 442), is more permeable to the influence of the dominant language.

To our knowledge, this study is the first one which attempts to look at Romanian *heritage speakers* considering the effects of the dominant language on processing *false friends* by applying psycholinguistic methods borrowed from *translation ambiguity* analyses. From a methodological perspective, the approach developed in this paper can be subsequently extended to other groups of Romanian heritage speakers in other linguistic environments.

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GS Morphology

A noun derived from a compound genitive through metonymy is bound to retain its original exocentricity, since it always refers to an object extraneous to the components of the compound (e.g., Bauer 2009; Scalise, Bisetto 2009) – the one that has been deleted by the metonymic process.

Nouns derived from a compound genitive represent three types of metonymies. The types of metonymies involved correlate with the derivative type of the compound genitive itself, namely, the source construction and the ending.

- The type salient feature for person/object (3) mostly corresponds to content (lexical) word + noun + -is (M), -e (F)
- The types salient feature for abstraction (4) and salient feature for location (5) mostly correspond to preposition + noun + -s/-š (M), -a (F)

(4)	bez-gais-a	<i>telp-a</i>	→	<i>bez-gais-s</i>
	without-air-GEN.SG.M	room-NOM.SG.F		bad-air-NOM.SG.M
	‘airless room’			‘bad air, lack of air’
(5)	pie-pilsēt-as	<i>ciem-s</i>	→	<i>pie-pilsēt-a</i>
	by-town-GEN.SG.F	village-NOM.SG.M		by-town-NOM.SG.F
	‘a village adjacent to a town’			‘immediate environs of a town’

Thus, the report will provide further analysis of semantics and formal features of nouns derived from compound genitives.

The data have been extracted from the different terminology databases, as well as various news, advertising and newsgroup portals, and mass media texts.

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Morphological complexity is mostly due to element order rather than to complexification

Martin Haspelmath

(Max Planck Institute for Evolutionary Anthropology, Leipzig)

keywords: morphological complexity, word order typology, simplification, affix, clitic

In this provocative talk, I point out that the prevailing view on “morphological complexity” has ignored the crucial role of element order and may thus have gone seriously astray. While earlier work (e.g. Greenberg 1960) merely observed differences in “morphological complexity”, more recent work has tried to identify external causal factors. In particular, McWhorter (2003; 2011; 2016), Lupyán & Dale (2010) and Trudgill (2011) have argued that particular sociolinguistic situations favour the development of “morphologically simple” languages, while others tend to lead to “complexification”.

The causal mechanism of simplification through adult acquisition seems plausible, but is it specifically “morphology” that is hard to acquire, or grammatical markers in general (including clitics)? What exactly is “morphology”, and thus “morphological complexity”?

Most straightforwardly, a morphologically complex word is one that has many constituent elements or requires many rules to be generated. But how are word boundaries drawn? There seems to be fairly widespread agreement that affixes exhibit host-class specificity (Zwicky & Pullum 1983; Haspelmath 2023), so that, e.g., the English definite article *the* is not a prefix (as it can occur not only before nouns, but also adjectives: *the+cup*, *the+new cup*), while the Swedish definite article *-en* is a suffix (as it occurs only after nouns: *kopp+en* ‘the cup’, *den nya kopp+en* ‘the new cup’, *kopp+en där borta* ‘the cup over there’). If this is adopted as the key criterion, then the affix status of a grammatical marker is co-determined by element order in a wide range of contexts. All of the following pairs of possibilities (where the marker is boldfaced) are richly instantiated in the world’s languages.

	AFFIX	NON-AFFIX
(A)	flag + NOUN (+ adjective)	flag (+ adjective) + NOUN
(B)	(adjective +) NOUN + flag	NOUN (+ adjective) + flag
(C)	(adjective +) NOUN + plural	NOUN (+ adjective) + plural
(D)	aspect + VERB (+ adverb)	aspect (+ adverb) + VERB
(E)	(object +) VERB + relativizer	VERB (+ object) + relativizer
(F)	subject + VERB + complementizer	complementizer + subject + VERB

Flags and number markers can be affixes only if adjectives do not intervene, aspect markers can be affixes if adverbs do not intervene, and so on. Thus, affixhood is dependent on element order, and if “morphological complexity” is determined via affixhood, then it depends on element order.

One might try to adopt other tests for distinguishing affixes from non-affixes, or hope to rely on test batteries. But none of these have been successful, and it is only for root changes that we have (near-)consensus about their morphological status. Thus, unless one wants to drastically restrict “morphological complexity” to root-change patterns, element order remains a crucial ingredient. The claims of sociolinguistic typology (which do have some prima facie plausibility) thus need to be approached more rigorously in the future, and it seems advisable to assess “complexity” also in terms of the presence or absence of grammatical markers regardless of their affix vs. clitic status.

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The derivational relationship between material borrowings in contemporary Lithuanian: A pilot study

Lina Inčiuraitė-Noreikienė & Bonifacas Stundžia
(Vilnius University & Vilnius University)

Keywords: derivational relationship, material borrowing, suffixed material borrowing, simplex material borrowing, contemporary Lithuanian

A growing interest in the interplay between word formation and borrowing has been observed in worldwide linguistics over the last few years (cf. ten Hacken, Panocová 2020). The adaptation of material borrowings across different languages has been extensively studied (cf. Ralli 2016; Gardani et al. 2014; Haspelmath, Tadmor 2009; Wohlgemuth 2009; Matras, Sakel 2007). However, these studies have predominantly focused on how material borrowings adapt to the phonological and morphological patterns of the recipient language rather than on their derivational relationships.

This pilot study, grounded in the principles of synchronic word formation analysis, aims to investigate the potential establishment of derivational relationships among suffixed material borrowings in contemporary Lithuanian. Although the material borrowings are transferred from the donor and, as a rule, neighbouring languages (e.g. Lith. *kolekcionierius* [m.], *kolekcionierė* [f.] ‘collector’ has been adapted on the basis of Rus. *kollekcjoner* коллекционер [m., f.], cf. Fr. *collectionneur* [m.], *collectionneuse* [f.]), they can function as derivatives because of their relationships with common root borrowed words (cf. some attempts to discern the said relationships in Inčiuraitė-Noreikienė 2022; Vaskelienė 2022; Inčiuraitė-Noreikienė, Stundžia 2015; Inčiuraitė-Noreikienė 2017; Pakerys 2013; Urbutis 2009). Nevertheless, the relationships under question are not usually discernible.

The investigation draws upon data sourced from the Dictionary of Internationalisms (DI, see Kinderys 2001). Following Dokulil's taxonomy (1994: 124), we posit the categorization of borrowed nouns into derivationally motivated and unmotivated. Put differently, suffixed material borrowings *legion-ier-ius*, *-ė* ‘legionary’, *recenz-ent-as*, *-ė* ‘reviewer’ and *administr-acij-a* ‘administration’ (see 1a-3a) manifest both formal and semantic motivation, as opposed to common root simplex material borrowing *legion-as* ‘legion’ (see 1b) and hybrid suffixed verbs *recenz-uo-ti* ‘to review’ and *administr-uo-ti* ‘to administer’ (see 2b-3b). Thus, in the said examples, the identification of a derivational relationship between suffixed material borrowings (1a-3a) and both common root simplex noun (see 1b) and hybrid suffixed verbs (see 2b-3b) in the recipient language can be posited:

- (1a) *legion-ier-ius*, *-ė* ‘legionary’ (suff. *-ier-*) DI \leftarrow (1b) *legion-as* ‘legion’.
(2a) *recenz-ent-as*, *-ė* ‘reviewer’ (suff. *-ent-*) DI \leftarrow (2b) *recenz-uo-ti* ‘to review’ (suff. *-uo-*) \leftarrow (2c) *recenzij-a* ‘a review’
(3a) *administr-acij-a* ‘administration’ (suff. *-acij-*) DI \leftarrow (3b) *administr-uo-ti* ‘to administer’ (suff. *-uo-*)

The said proposal is based on the fact that suffixed material borrowings are morphologically more complex (see 1a-3a) and are identifiable through common root simplex material borrowings (see 1b) and

hybrid suffixed verbs (see 2b-3b; 2b contains a truncated stem *recenz[ij]-uo-ti* sharing the same root with *recenzij-a* (2c) in the recipient language; the verbal suffix *-uo-* of 2b and 3b is omitted in the derivational process (see Urbutis 2009: 293; cf. Stundžia, Inčiuraitė-Noreikienė 2023; Stundžia, Inčiuraitė-Noreikienė 2022; Inčiuraitė-Noreikienė 2022; also see Marchand 1969: 218–219). Moreover, affixed material borrowings are integrated into the description of the Lithuanian word formation system (see Stundžia 2016: 3094f.; Urbutis 1965: 409f.; Urbutis 2005: 138).

Symbols

- ←→ A dashed arrow shows a derivational relation between a suffixed and common root simplex material borrowing, with the latter serving as the base.
- ← A simple arrow shows a derivational relation between a hybrid suffixed derivative and its base.

Abbreviations

- DI *Dictionary of Internationalisms*, see Kinderys 2001.
- f. feminine
- m. masculine
- suff. suffix

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Selectional and Morphosyntactic Properties of Negation Raising Predicates: A view from German, Polish and Russian

Beata Trawiński
(IDS Mannheim)

Keywords: Negation Raising, Corpus, German, Polish, Russian

It is known that for certain verbs (such as think or believe) a negation in the matrix clause can be understood as a negation of the embedded proposition. Such verbs are called negation-raising predicates (NRs) and are attested in many languages (Fillmore 1963, Bartsch 1973, Horn 1978, Gajewski 2007). It has been observed that NRs show a strong preference for the first person singular present non-progressive form (in English), and in this respect they behave similarly to performatives (Lakoff 1969, Prince 1976). Semantic classes of NRs are fairly consistent across languages but there are variations in their distribution that still need to be explored. In this paper, we present distributional profiles of selected NRs in German, Polish and Russian, with a special focus on the morphosyntactic form of NRs and the properties of their clausal complements. In particular, the following NRs have been studied on the basis of corpus data:

German: *denken* 'think', *glauben* 'believe', *vermuten* 'suppose' and *hoffen* 'hope' (DeReKo; Kupietz et al. 2018 and InterCorp v13ud; Čermák and Rosen 2012)

Polish: *sądzić* 'think' and *wierzyć* 'believe' (Modrzejewska 1981) (NKJP; Przepiórkowski et. al. 2012 and InterCorp v13ud)

Russian: *dumat'* 'denken', *ożdat'* 'erwarten', *verit'* 'glauben' (Horn 1978 after Luborsky 1972) (RNK and InterCorp v13ud)

The results show that the German and Polish NRs under negation are indeed strongly associated with the first person singular present form. This observation also holds for the Russian *dumat'* 'to think' and *verit'* 'to believe', while *ożdat'* 'to expect' occurs most often in the third person. Interesting correlations can also be observed between the negated forms of NRs and the form of selected complement clauses. All analyzed German NRs select indicative or (less frequently) subjunctive complement clauses introduced by *dass* 'that'. No complement-free verb-second clauses were attested. The negated Polish verbs *sądzić* and *wierzyć* show two selection patterns: They can select indicative complement clauses introduced by the complementizer *że* 'that' and subjunctive complement clauses introduced by the complementizer *żeby*. Unlike sentences with *że*, where affirmative structures are possible, sentences with *żeby* necessarily contain a negation in the matrix clause. Given this, and assuming the performativity hypothesis, the preference for the first person present form of *sądzić* and *wierzyć* is expected to be stronger in *żeby* clauses than in *że* clauses. This is indeed supported by the corpus data. In particular, the results of our 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 is significantly more associated with *żeby*-clauses than with *że*-clauses. However, Russian NRs behave differently. Like their Polish counterparts, they show two selection patterns, selecting indicative complement clauses introduced by the complementizer *что* 'that' and subjunctive complement clauses introduced by the complementizer *чтобы*. However, the indicative *что*-clauses are strongly preferred in all morphosyntactic forms of NR. A closer look at these

data will help to better understand the relationship between NR, performativity, mood and assertivity in a cross-linguistic perspective.

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A structural mediation between functional-adaptive constraints and morphology

Lukas Denk

(University of New Mexico, Albuquerque)

Keywords: Comparative linguistics, Morphology, Morphosyntax, Phonetics and Phonology, Typology

A recent debate among functional linguists has been between result-oriented and source-oriented explanations for structural distributions across languages (Schmidtke-Bode et al. 2019). Result-oriented explanations (Haspelmath 2019, 1999; Levshina 2022, 2019; Michaelis 2019; Hawkins 2004, 2014) argue that these distributions depend on constraints related to communicative motivations ('functional-adaptive constraints'). These constraints relate to what is economic/efficient for users, such as shortening words that occur frequent (Zipf 1935, Bybee 2007). Source-oriented explanations (Cristofaro 2019, Collins 2019, Garrett 1990, Aristar 1991, Givón 1984, Greenberg 1969) instead argue that the historical sources of structure are a stronger factor for distributional asymmetries. For example, nasal vowels are rarer than nasal consonants not necessarily because they are less sonorant, but because nasal vowels arise from nasal consonants following vowels (Greenberg 1978), and this shift does not happen in all languages.

While these perspectives can certainly be unified, this paper argues that both fail to account for the persistence of structures that are non-adaptive for users. Certain languages exhibit morphological patterns that are highly complex, such as lexically conditioned inflection (LCI). LCI involves inflectional paradigms that are unpredictable because they are either restricted by certain lexemes or by lexical classes. Users must therefore not only know the paradigm but also the lexeme (class) to master the correct inflection. Examples include ablaut systems or conjugation classes in Indo-European languages, and similar patterns across the globe, such as in Yelî Dnye (Yele, Papua New Guinea), Zuaran Berber (Afroasiatic, Tunisia) or Ket (Yeniseian, Russia). From a result-oriented perspective, it is difficult to attribute functionality to LCI, even if there are patterns of multiple convergence (fusion of affixes with stem, analogy of affixes across semantic classes). Source-oriented explanations, on the other hand, would emphasize the accidental character of LCI, but would not be able to generalize trajectories of this type of changes that lead to less systematic patterns (increase in entropy).

However, LCI shows relevant structural associations with other parts of words. Our study of 79 verbal morphological positions with LCI in 30 genetically and geographically distant languages shows that LCI frequently patterns with prosodic prominent positions such as stressed syllables, as opposed to 134 non-lexically conditioned inflectional positions. This association with prominence evokes functional-adaptive constraints because prominence is adaptive for users. However, since the prominence does not derive from morphology, but from phonology, the relationship to functional-adaptive constraints is indirect. The novel contribution of this paper is that typological explanations must account for the role of structural elements through which the functional-adaptive constraints are mediated, impacting the distributional asymmetries of specific phenomena. Missing this structural link is common because it is not evident in phenomena that lend themselves directly to source- or result-oriented explanations.

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NN and VV coordinate compounds in the lexical semantic framework

Masaharu Shimada & Akiko Nagano
(University of Tsukuba & University of Shizuoka)

Keywords: cross-categorical approach to compounding, coordinate compounds, dvandva, appositive, lexical semantics

In coordinate compounds, lexemes of the same syntactic category are asyndetically coordinated. It is widely accepted that the binominal type is not monolithic and involves either apposition, producing e.g. *actor-author*, or set formation/collectivization that produces dvandvas (Bauer 2008). The purpose of this paper is to introduce VV compounds into the NN-centered research landscape and to argue that they also divide along the appositive-dvandva distinction.

The only study that touches on this possibility is Ralli (2013), who suggests: “[...] the distinction in coordinative and appositive compounds applies only to [N N] compounds. For [A A] and [V V] formations, this distinction is meaningless since their semantics do not imply a referent” (p.161). Yet, it would not be meaningless to explore some onomasiological property that can prevail cross-categorially. The two quantity-related semantic features [\pm B] (bounded) and [\pm CI] (composed of individuals) capture the widely recognized parallelism between nominal number and verbal aspect, as summarized in Table 1 (Lieber 2004: Ch.5).

Table 1. Application of quantitative features to nouns and verbs (Lieber 2004: 137, 139)

Semantic features	Examples in N	Examples in V
[+B, -CI]	singular nouns	nonrepetitive punctual verbs (<i>explode, name</i>)
[-B, -CI]	mass nouns	nonrepetitive durative verbs (<i>descend, walk</i>)
[+B, +CI]	group nouns (<i>committee, herd</i>)	<logically impossible>
[-B, +CI]	plural nouns (<i>cattle, sheep</i>)	repetitive durative verbs (<i>totter, pummel</i>)

Using data from dvandva-rich languages, we first show that additive dvandvas, the canonical type, are [\pm B, +CI]; they are either group nouns or plural nouns, exhibiting lexical plural marking (Acquaviva 2008). The plurality of the additive dvandva *oya-ko* ‘parent and child’ in Japanese, a non-Number-marking language, can be confirmed by constructional tests; the item occurs as the sole subject of the *meet/resemble*-type verb. Next, using data from a VV-rich language, we demonstrate that there exist VV coordinate compounds that will be analyzed as [-B +CI] in the same theory. Table 2 compares two biverbal constructions that have been independently called “dvandvas” in Japanese linguistics.

Table 2. Comparison of VV coordinate compounding patterns in Japanese.

	Pattern A	Pattern B
Examples	<i>naki-sakeb(u)</i> 'cry and shout', <i>tae-sinob(u)</i> 'bear and endure', <i>odoroki-akirer(u)</i> 'get surprised and appalled', etc.	<i>iki-ki</i> 'come and go', <i>uri-kai</i> 'buy and sell', <i>ake-sime</i> 'open and close', etc.
Syntactic category	canonical verb	nonconjugational verb (which inflects periphrastically)
Accent pattern	Same as subordinate and modification VVs	Same as NN dvandvas
Semantic relation	co-synonymic	reversive, converse, co-hyponymic

We argue that Pattern B is true VV dvandvas because they are uniformly [-B +CI] or repetitive durative verbs. The quantity property of Pattern A, on the other hand, depends on the component verbs. Contrary to or unlike the traditional perspective, we argue that Pattern A is similar to appositives (*actor-author*) in that two predicates are compounded and that those predicates are linked to the same subject, following the default principle of argument-structure matching in compounding (Lieber 2004). This outcome would contribute to emerging research projects that attempt to encompass binominal and biverbal lexical constructions (Lieber and Štekauer 2009, Bagasheva 2015, Bauer 2017).

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GS Sociolinguistics

Translanguaging in online contexts of mobility: The case of Russian-speaking communities in Italy and Estonia

Alessandra Dezi
(University of Tartu)

Keywords: Russian speakers, online communication, contexts of mobility, translanguaging, spatiotemporal frames.

This paper presents the results of a project investigating the online communication of Russian speakers living in Italy and Estonia. Online spaces of these communities are defined here as contexts of mobility, i.e., contact zones between languages and cultures characterised by various spatiotemporal frames interacting with one another (Blommaert 2010; Simpson 2017). In previous studies, online and offline translanguaging practices were often subsumed under the notion of ‘code-switching’ and were analysed under various frameworks with the focus on their formal and pragmatic dimension (Kostandi 2015; Perotto 2014; Verschik 2016; Zabrodskaia 2008). However, in virtual contexts of mobility, where individuals blend communicative resources into complex linguistic and semiotic forms, code-switching frameworks exhaust the limits of their descriptive and explanatory potential (Blommaert 2014; Blackledge, Creese 2017).

In this talk, I describe the dynamic use of linguistic and semiotic resources in Facebook groups and online forums of Russian-speaking community of Italy and Estonian. The material was collected between 2015 and 2022, following the procedures of online ethnography (see Hine 2000; Yang 2003), and comprises two distinct corpora of 600 postings each. I focus on the cases of ‘intra-lingual translanguaging’, i.e. “the movement (and mediating and interpreting) between one socially recognised language and another” (Simpson 2017: 12). Such a broader approach to the material enabled me to include less evident cases of language contact, reflecting the interaction of different spatiotemporal frames, as in (1) and (2).

(1) *A eshche dlya sokrashcheniya Provincia di Milano, ego oblast' – Podmilanie.*
'And also for brevity Provincia di Milano, its area – Podmilanie.'

(2) *A u menja vo Francii sobralis' vse na pasportnom kontrole i bukval'no «rzhali», passport prishel'ca 🤪*

'And in France, everyone gathered at the passport control, and they literally 'burst out laughing' at the alien's passport.'

In (1), *Podmilanie* is constructed with the Russian prefix *pod* ‘beneath’ and suffix *-ie*. Such a pattern is often used in Russian to create unofficial names for regions, e.g., *Podmoskov'e* ‘the surroundings of Moscow.’ In the same vein, *Podmilanie* in (1) refers to the Milan district (It. *Provincia di Milano*) and shows how the speaker creates a hybrid form transferring Russian spatial realia to the Italian context. In (2), *passport prishel'ca* is a calque from Eng. *alien's passport*, i.e. an official designation of the document issued to Estonian residents who could not prove pre-1940 arrival to Estonia, and/or failed or refused to take the Estonian language exam (Est. *väälismaalase pass* ‘foreigner's passport’). By using this calque, the author ironically reinterprets this document as “a passport of an extra-terrestrial”, referring to the conflictual status between Russian speakers and Estonian state in post-Soviet era.

The results reveal that speakers creatively reconfigure language resources by juxtaposing spatiotemporal frames. Intralingual units reflect speakers' liminal, transnational space and enable the construction of complex identities with direct references to migratory trajectories (also consistent with findings in Kostandi 2018). In the online discourse of Russian speakers in Italy, these units reflect adaptation and integration in Italian society, while the Estonian material shows the conflictual relationship with the Estonian state.

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“Glück auf!” The construction of regional identities and belonging in the British and German former mining regions

Nantke Pecht, Evelyn Ziegler, John Bellamy & Natalie Braber

(University of Münster, University Duisburg-Essen, Manchester Metropolitan University & Nottingham Trent University)

With the decline of the coal mining industry in the UK and Germany, efforts in former mining regions to find a new sense of regional identity and belonging have varied considerably. While regeneration efforts that recognize mining heritage have been profoundly beneficial in post-industrial areas (Wicke, Berger, and Golombek 2018; Wagner 2022), less tangible forms of cultural heritage such as language have been largely overlooked (Braber 2022: 19-20). Particularly interesting in this regard are the British former mining regions and the German Ruhr Area as one of the largest former mining regions of Europe, where underground mining stopped only recently. In this talk, we provide first insights into a comparative study on the former mining language of speakers from the UK and the German Ruhr Area. While a lexical analysis of corresponding terms in German and English shows a large proportion of direct equivalents for technical vocabulary (e.g., tools, machinery), notable differences emerge amongst expressions that are socially and culturally significant, such as food, greetings and personal relationships.

The aim of our talk is to analyze lexical and semantic variation of former mining terminologies (e.g., English “mate,” “neighbour” and “marra,” and German “Glück auf” and “Kumpel”) and to discuss the symbolic meaning of these variants in terms of the construction of new regional identities, belonging and solidarity in times of de-industrialization. In addition, we examine whether and which linguistic practices are emerging that reconstruct and shape cultural memories of the coal mining past for former miners, locals of the region and newcomers. To answer these questions, we examine (1) both spontaneous and elicited explanations of ex-miners from 2022/23, and (2) short sociolinguistic interviews with speakers residing in the respective regions conducted in 2023 (67 interviews in the Ruhr Area; and 21 interviews in the UK). The explanations of the former miners’ stem from audio-recordings conducted in different mining museums in the UK and Germany. In our talk, we will first discuss recent usages and developments based on audio material, and then place the findings in the broader context of the speakers’ metapragmatic awareness and how this correlates with social variables. In doing so, we aim to shed more light on how former mining expressions have undergone changes in their indexicality (Silverstein 2003) over time.

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Sociocultural and environmental correlates of linguistic diversity in Africa

Miri Mertner & Gerhard Jäger
(University of Tübingen & University of Tübingen)

The uneven distribution of languages and language families across the world has long fascinated linguists and anthropologists. The languages of the world seem to be most concentrated close to the Equator, and Nettle (1998) was among the first to posit a link between biodiversity and linguistic diversity. Since then, a few quantitative studies have examined the link between environmental variables, like climate and terrain elevation, and linguistic diversity more broadly (e.g. Moore et al., 2002; Hua et al., 2019). So far, environmental variables alone have failed to account for the areas of the world with the highest levels of linguistic diversity.

Sociocultural variables could provide an important piece of this explanatory puzzle. A study by Currie and Mace (2009) included sociocultural variables (political complexity and subsistence strategy) in their study on the effect of ecological, geographical and social variables on the area covered by languages in Eurasia and Africa. They found that a higher level of political complexity, defined simply as the number of levels of jurisdictional hierarchy beyond the local community, was associated with a larger language area and thus with lower language density. However, they noted that a large portion of the variance could not be explained by the model, which suggests that it may be necessary to include a wider range of variables to explain the missing variance.

Though several studies have been done on the drivers of linguistic diversity, no conclusive results have been reached. One potential reason for this is the lack of a widely accepted measure of linguistic diversity. Previous studies have relied on language density as a measure thereof. However, language density does not necessarily entail phylogenetic diversity. To address this issue, we define a measure of linguistic diversity which includes information about both language density and phylogenetic diversity.

Second, we address the problem of spatial and phylogenetic non-independence through the use of a spatial model and phylogenetic decorrelation of the predictor variables. In this way, we can ensure that any correlations we find are not driven by phylogenetic relatedness or geographical proximity. Third, we include a wider range of sociocultural variables than previous studies have done. Lastly, we focus on a specific area of the world – Africa – and highlight the need for methods which can accommodate areal variation, as the drivers of linguistic diversity may differ across the world. The results will be contextualised with reference to previous literature on global linguistic diversity, sociolinguistic typology, and African linguistics.

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A sociotypological approach to the role of literacy in language maintenance

Jenna Sorjonen
(University of Helsinki)

Keywords: language ecologies, language endangerment, language policy and planning, literacy

In this talk, I present preliminary findings of a global sociotypological study on literacy development, i.e. the creation and uptake of a writing system and further evolution of the written use of endangered and marginalised languages. I review literacy development as part of language policy and planning (LPP) aimed at language maintenance. The development of writing systems for previously unwritten languages has long been considered a vehicle for enhancing their status and use (Grenoble & Whaley 2006). Literacy development has largely been founded on Western, monolingually oriented models based on the notion of standard language. Applied on a variety of highly diverse social settings around the world, these models have often conflicted with local linguistic norms and practices, leading to counter-effective results for language maintenance (see e.g. Lüpke 2020).

This study addresses the following questions: Which factors affect how a new writing system fits into a language ecology? How do language ecologies differ in which literacy development strategies best support language vitality? To answer them, data are collected from sociolinguistic descriptions of 30 languages from 15 countries, sampled to capture variety of language ecologies (Mühlhäusler 2010). A qualitative analysis combining insights from language sociology and typology (cf. Di Garbo et al. 2021) identifies key social features that characterise language ecologies with regard to literacy development, or 'writing ecologies'. These features are then mapped with employed literacy development strategies and their success to produce a first empirical description of factors influencing literacy development across the world's language ecologies.

Based on patterns emerging from this analysis, I suggest broad types of writing ecologies can be identified based on the continuity of intergenerational language transmission, existing literacy skills and practices, multilingualism, and local norms regarding linguistic variation. Awareness of these factors can support ideological clarification (Fishman 1991) in literacy planning which, I argue, should answer three questions: literacy 'for what', 'for whom', and 'by whom'. First, the status of intergenerational language transmission, multilingualism, and existing literacy skills and practices arise as key factors shaping expectations for writing around two dominant objectives: literacy for language maintenance or literacy for mother tongue education. Second, the questions of literacy 'for whom' and 'by whom' seem to condition the acceptability and usability (Cahill 2018) of new writing systems. Aligning literacy solutions with local norms of linguistic variation seems to support acceptance, learnability and uptake and necessitates defining 'for whom': who are considered speakers, on whose variety writing is to be modelled, and whose needs are prioritised. Lastly, community agency in literacy development appears to support uptake of writing, and LPP with and by the community seems to have become the norm in the more recent cases of literacy planning.

By outlining key considerations for literacy development, this study contributes to developing LPP that safeguards linguistic diversity and the educational and language rights of speakers of endangered and marginalised languages.

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Bridging corpus and survey data: Ethnicity and age impact on Singapore English modals

Carmelo Alessandro Basile
(Université Sorbonne Nouvelle)

Keywords: Singapore English, modality, corpus analysis, survey data, contact grammaticalization

The contact variety of English spoken in Singapore (SgE) has undergone significant grammatical restructuring, influenced by other languages spoken on the island, namely Mandarin Chinese, Malay, and Tamil. One domain that has witnessed a distinctive development compared to inner-circle varieties of English is modality. At least two approaches have been proposed to explain SgE modality: the substratist and the contact-grammaticalization approaches. The substratist approach (Bao 2010) suggests that features from the lexifier language (English) may converge with equivalent features in the substratum language, adopting their functions. For example, the restriction to non-epistemic uses of *must* in SgE is attributed to the substratum influence of the Mandarin deontic particle *bixu*, which has not yet grammaticalized to epistemic uses. The second approach explores modality through the lens of contact-grammaticalization theories (Heine and Kuteva 2005). Building on Ziegeler (2014), Basile (2023) argues that some over-generalized uses of modal verbs can be explained by a recapitulation of earlier diachronic stages in the lexifier. The frequent non-epistemic use of *must* in present-day SgE can be seen as a replica of past dynamic/generic meanings of *must*, observed since Early Middle English times (Gregersen 2020).

These two approaches show that the influence of lexifier and substrate languages is crucial in assessing different contact phenomena. Nevertheless, past studies on the modal system of necessity and obligation in SgE (e.g. Bao 2010; Hansen 2018; Loureiro-Porto 2019; Basile 2023) have all been conducted on corpora, such as ICE, lacking metadata able to distinguish the substrate languages of their contributors. Importantly, the common production of a marked feature by different ethnic groups sharing different substrates would indeed pose a threat to the substratist approach.

Building on Basile (2023), the present paper re-explores the use of (semi-)modal constructions of necessity and obligation (i.e. *must*, *HAVE to*, *(HAVE) got to*, *gotta*, *NEED to*) in SgE by incorporating, for the first time in the literature, a sociolinguistic survey intended to elicit their production among participants belonging to different ethnicities (Chinese, Malay, Indian) and age groups (18-29, 30-49, 50+). Participants were asked to tell what they would say in a series of imaginary situations, such as (1) and to select the most natural modal constructions from given alternatives.

- (1) Your daughter had a party yesterday and left the house in a mess! You need to receive guests in an hour. What would you say to your daughter to make her clean the house immediately?

Survey results reveal that ethnicity does not affect epistemic/non-epistemic *must* production, thus challenging Bao (2010) and supporting Basile (2023). Age exhibits, on the contrary, significant variance [$p < 0.001$]. Following an apparent-time approach (Labov 1963), the paper shows that the survey data confirm a declining trend for *must* and a sharp increase of *need to* in SgE (cf. also Hansen 2018, Loureiro-Porto 2019, and Basile 2023). The rise of *NEED to*, in particular, is presented as an effect of substrate reinforcement from a parallel construction in Mandarin.

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The writing reform and ‘Latinization’ of Written Kazakh: A survey of attitudes

Sami Honkasalo & Tansulu Temirbekova
(University of Helsinki & University of Szeged)

Keywords: Kazakh, Central Asia, language attitudes, writing reform, language policy

The present study analyzes the attitudes and ideologies among Kazakhstanis regarding the writing reform of the Kazakh language. The Latin alphabet will replace the current Cyrillic alphabet in a process that has been described in terms of efforts to modernize and support Kazakh (see *inter alia* Dotton 2016). Based on a sample of questionnaire 398 replies collected from all over Kazakhstan in 2022, the present sociolinguistic language attitude survey is the most extensive work of its kind, both in terms of the number of respondents and the number of survey questions. In multilingual Kazakhstan, the correspondents were divided into three groups based on their dominant language usage in daily life: those who primarily speak Kazakh, those who primarily speak Russian, and those who actively use both languages without a clear preference.

The results show a conflict between the idea and its execution: While general support for the writing system reform remains strong in Kazakhstan regardless of one’s mother tongue(s) and linguistic practices, the citizens are not satisfied with the officially proposed versions of the Latinized alphabet with differing orthographic approaches. In other words, the language policy enjoys wide support, but its practical application and failure to create an orthography able to gain acceptance are under criticism. In addition, the surveyed population sample differs considerably regarding its language attitudes towards various aspects of the Latinization project, such as its political implications. While speakers with a preference for Kazakh connect Latinization with decreasing Russian influence and Pan-Turkism, such associations are far less frequent among speakers with a preference for Russian. Similarly, speakers preferring Kazakh strongly support the sizeable allocation of state resources and speed of the ongoing writing system change. On the other hand, speakers who prefer Russian, while generally supporting the reform, appear as far more skeptical on both respects, highlighting a division of opinion in terms of budget and suitable speed in implementing the ongoing orthographic reform.

In terms of future steps, the study concurs with the earlier findings, such as Kumar et al. (2022) arguing that the Latinization process remains in its incipient stages. Even after the eventual official implementation, a period of *digraphia* with both the Latin and Cyrillic alphabets simultaneously at use will follow. Unless an official orthography capable of gaining higher level of acceptance is developed, the near future is likely to witness a situation where various Latinized orthographies accompanied by *ad hoc* spelling will be at use, a course of development already taking place in linguistic practices and landscapes all over Kazakhstan.

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The mediatization of the Italomance repertoire in the series *The White Lotus*

Giulio Scivoletto
(Università di Catania)

This presentation deals with the mediatization of the Italomance repertoire in the HBO series *The White Lotus*. After the first season in Hawaii, the second is set in Sicily. Aired in autumn 2022, this season was awarded the Golden Globe (Best Limited or Anthology Series) in 2023, and it is a nominee for the upcoming Emmy Awards (Best Drama Series) in 2024. The story takes place in a luxury resort (*The White Lotus*), with a plot revolving the antics of two sets of characters: 1) American tourists who stay at the resort, and 2) the local employees. As a backdrop to the adventures of the main characters, the local characters are intended to represent the linguistic and cultural reality of the area.

The presentation will show how the local characters behave from a sociolinguistic point of view, in order to evaluate how *The White Lotus* mediatizes the diagglossic repertoire (cf. Auer 2005) in the Italian-Sicilian case. The term *mediatization* (Agha 2011) refers to “the recontextualization of communicative practices through the use of digital media” (Androutsopoulos 2016: 295). This analysis is focused on two issues: a) the representation of the repertoire; b) the speech performance. This case of mediatization is taken into account, not in terms of intentions or awareness at the level of production, but rather for the metapragmatic stereotypes (Johnstone 2011) that emerge for the reception by the audience.

The Italian-Sicilian diagglossic repertoire is well represented. Standard Italian is limited to secondary characters when speaking in formal contexts. Neo-standard Italian (which encompasses the different regional varieties of Italian; cf. Berruto 1987, Cerruti, Crocco, Marzo 2017) is depicted as the actual norm. The local Italomance variety (Sicilian) hardly surfaces, but at choice moments it is strategically used in code-switching strategies, also among youngsters (Alfonzetti 2017). Negative attitudes are directed towards regional varieties of Italian (cf. De Pascale, Marzo, Speelman 2017). As to the speech performance, we observe a split. Local characters are played by both local and non-local actors. As a consequence, the different varieties come across as either authentic or stylized (cf. Bucholtz 2003, Bell & Gibson 2011, Clark 2019). Stylization (cf. Coupland 2001) does not occur as an in-group activity (i.e., carried out by a community dealing with the stereotypes by which it is affected); instead, it is an out-group stereotyped simplification.

In sum, the mediatization of the Italomance sociolinguistic space in *The White Lotus* is claimed to be problematic. The diagglossia is accurately portrayed, including norms of language use, code-switching patterns, and attitudes. Nonetheless, non-standard varieties are associated with metapragmatic stereotypes, and negative prejudices are reinforced against bilingual practices and repertoires.

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GS Typology

Light verbs and their role in grammatical voice constructions in eastern Indo-Aryan languages

Snigdha Medhi, Anindita Sahoo & Foong Ha Yap

(Indian Institute of Technology Madras, Indian Institute of Technology Madras & Chinese University of Hong Kong, Shenzhen, China)

Keywords: Indo-Aryan languages, Grammatical voice, Middles, Passives, Light verbs

This paper analyzes how two types of light verbs are recruited as voice markers in 3 eastern Indo-Aryan languages. We will focus on light verbs derived from directional and copula verbs to determine how they are deployed as passive and middle voice markers in natural conversational discourse in Assamese, Bangla, and Odia (10 hours from each language).

Passive constructions typically involve subject demotion and object topicalization, where the logical object is highlighted and the agent is pushed to the background (e.g., Keenan 1985, and Shibatani 1985). Passive constructions in conversational discourse in eastern Indo-Aryan languages are relatively rare and are typically formed using light verbs, for example, *ja* 'go' and *ho* 'be' in Assamese, as shown in (1a) and (1b). As passive markers, these two light verbs generally occur in complementary distribution; when they do co-occur, *ho* must precede *ja*, with the former serving as the noun incorporation device while the latter assumes the role of passive marker, as in (1c). Worth noting is the compatibility of the stative aspectual semantics of *ho* 'be' and the high temporal permanence semantics of the incorporated nouns in passive constructions such as (1c), which could explain why light verb *ho* is preferred over its dynamic counterpart *ja* 'go' as a noun incorporation device, as seen in (1d). Another asymmetry between the two light verbs is that inabilitative passives are possible only with *ja* 'go' but not *ho* 'be', as seen in (2a) and (2b). These asymmetries indicate that the directional light verbs have a broader syntactic scope than their stative counterparts.

Middle constructions are monovalent, with the sole argument in the subject position being both Trigger and Endpoint (Kemmer 1993). In this sense, middles can be syntactically monovalent but semantically bivalent. In Assamese, Bangla, and Odia, middle constructions are often lexically realized without the need for light verbs, as in (3a), but morphologically-marked middle constructions can also be formed using directional light verbs such as *ja* 'go' or *as* 'be' to signal a spontaneous or inchoative reading, as seen in (3b) and (3c) respectively. As seen in (3d), when the speaker's subjective evaluation is involved, as indicated by the presence of the evaluative adjective 'good' and the adverbial *xohoze* 'easily', a facilitative reading emerges—in this case 'A wound heals easily', where *hoi* 'be' is used as an imperfective light verb to yield a generic aspectual reading that is compatible with the inherent property of a wound to heal itself, while *ja* 'go' is deployed as a light verb to signal a middle voice reading in addition to hosting the tense-mood-agreement markers.

Our analysis reveals that the directional light verbs have a wider range of voice marking uses. When both light verbs co-occur, the stative 'be' type can be used to form denominal and deadjectival verbs, while the dynamic 'go' type is used as a passive or middle voice marker. Findings from this study contribute to our greater understanding of the role of light verbs in the construction of voice phenomena, with implications for other languages.

Examples from Assamese:

- (1) a. *iyat mankho pu-a ja-i / ho-i*
here meat get-IMPf go-HAB.PRES / be-HAB.PRES
'Meat is sold here.'
- b. *mondir-ot prarthona kor-a jai-i / ho-i*
temple-LOC prayer do-IMPf go-HAB.PRES / be-HAB.PRES
'Prayers are done in a temple.'
- c. *ketiaba mur duara bhul ho-i ja-i*
sometimes 1SG.GEN by mistake be-IMPf go-HAB.PRES
'Mistakes are done by me sometimes.'
- d. **ketiaba mur duara bhul ja-i ho-i*
sometimes 1SG.GEN by mistake go-IMPf be-HAB.PRES
'Mistakes were done by me sometimes.'
- (2) a. *mur duara ei bhat-khini khu-a na-ja-bo*
1SG.GEN by this rice-CLF eat-IMPf NEG-go-FUT
'This much food cannot be eaten by me.'
- b. **mur duara ei bhat-khini khu-a no-ho-bo*
1SG.GEN by this rice-CLF eat-IMPf NEG-be-FUT
'This much food cannot be eaten by me.'
- (3) a. *botol-tu bhang-il-e* [lexical middle: spontaneous]
bottle-CLF break-PFV-AGR
'The bottle broke.'
- b. *botol-tu bhang-i go-l / *ho-i* [grammatical middle: spontaneous]
bottle-CLF break-IMPf go-PFV / *be-HAB
'The bottle broke.'
- c. *phol-bur pok-i as-e / *ja-i* [grammatical middle: inchoative]
fruit-PL ripe-IMPf be-IMPf /*go-HAB.PRES
'The fruits are ripening.'
- d. *ghaa xohoze bhal ho-i ja-i* [grammatical middle: facilitative]
wound easily good be-IMPf go-HAB.PRES
'A wound heals easily.'
Lit. 'A wound easily becomes good.'

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Table 1. Functional distribution of directional light verbs in Assamese, Bangla and Odia

Directional verbs and their extended uses as light verbs		3 eastern Indo-Aryan languages		
		Assamese	Bangla	Odia
Lexical verb	'go'	<i>ja</i>		<i>galaa</i>
Middle voice marker	spontaneous			√
	inchoative			√
	potential			√
	facilitative			√
Passive voice marker	Implicit agent			√
	Oblique agent			√

Table 2. Functional distribution of stative light verbs in Assamese, Bangla and Odia

Directional verbs and their extended uses as light verbs		3 eastern Indo-Aryan languages		
		Assamese	Bangla	Odia
Lexical verb	'be'	<i>ho</i>		
Middle voice marker	spontaneous			
	inchoative			
	potential			
	facilitative			
Passive voice marker	Implicit agent			
	Oblique agent			

On the extended uses of *paD* ‘fall’ and its cognates as voice markers in Dravidian languages

Anindita Sahoo, Foong Ha Yap & Gunti Prem Sagar

(Indian Institute of Technology Madras, Chinese University of Hong Kong & Indian Institute of Technology Madras)

Keywords: Grammatical voice, Dravidian languages, Middles, Passives, Light verbs, Cognates

Voice markers often extend their functions across different voice domains. Korean, for example, has a voice marker *-eci*, derived from a motion verb *ti* ‘to fall’, which initially develops into a middle marker with spontaneous and inchoative uses, then into a passive marker with and without overt agents, before extending further within the middle voice domain into a facilitative marker (Ahn & Yap 2017). The Korean *-eci* narrative not only highlights a semantic extension from middles to passives; it also highlights that further extensions within the monovalent middle voice domain can continue while bivalent passive voice constructions emerge. The present study focuses on the semantic extensions of voice markers in Dravidian languages. We examine how ‘fall’ verbs develop into voice markers in Tamil, Telugu, Malayalam, and Kannada. Data for our analysis come from reference grammars (DED), etymological dictionaries, and elicitations from native speakers.

Our analysis reveals that the ‘fall’ verbs *paD* in Telugu and *peTTu* in Malayalam yield spontaneous and inchoative (but not facilitative) uses in the middle voice domain, as well as passive uses with and without overt agents (see Table 1). Tamil *paT* has developed a similar range of middle and passive functions; however, although its lexical verb *paT* is used for a wider range of actions (e.g. ‘to lie, rest, roost, sleep, die’, and even ‘to kill’), its usage does not include the meaning ‘to fall’. Tamil further differs from Telugu and Malayalam in having recourse to an existential verb *aa* (‘to exist, become, happen’), which has also developed inchoative and passive uses but not spontaneous ones. This is partly due to its lexical semantics as a relatively stative verb, which is incompatible with spontaneous readings. Another plausible reason is the preference among Dravidian languages to rely largely on bare unaccusative verbs without recourse to a middle voice marker for spontaneous predicates.

Similar to Tamil, Kannada likewise makes productive use of its existential verb *aagu* (‘to exist, become, happen’) as a voice marker for middle and passive constructions, and has even extended its middle voice uses beyond inchoative to spontaneous constructions as well. On the other hand, Kannada makes more restricted use of *paDu* as a grammatical voice marker. Beyond meanings such as ‘to lie down’ and ‘die’, Kannada *paDu* is also used with the meaning ‘to experience, to suffer’, facilitating the rise of *paTT* as a passive voice marker, while leaving the ‘fall’ verb *bidd* to develop into an inchoative marker.

Our findings indicate that lexical verbs such as *paDu* can give rise to a variety of extended lexical meanings, which in turn can lead to variations in the range of grammatical voice markers available in different languages. Worth noting typologically, whereas spontaneous uses emerged earlier than inchoative ones for Korean *-eci* middle constructions, our findings indicate that inchoative uses are more

productive (hence potentially more basic) for *paDu*-derived constructions in Dravidian languages, with language-specific preferences (e.g. whether or not to deploy a voice marker) also playing a role in the development of their voice system.

Table 1. Extended uses of change-of-state verbs as voice markers in 4 Dravidian languages

Dravidian language	Lexical source	Voice marking functions				
		Middle voice marking			Passive voice marking	
		Spontaneous middle	Inchoative middle	Facilitative middle	Passive (no overt agent)	Passive (with overt agent)
Telugu <i>paDu</i>	<i>paD</i> 'to fall, suffer'	✓ Restricted	✓ ✓ Productive	NO	✓ ✓ Productive	✓ ✓ Productive
Malayalam <i>peTu</i>	<i>peTTu</i> 'to fall into, to be trapped or caught'	✓ Restricted	✓ ✓ Productive	NO	✓ ✓ Productive	✓ ✓ Productive
Tamil <i>paTu</i> and <i>a:</i>	<i>paT</i> 'to lie down, rest, roost, sleep, die, kill'	✓ Restricted	✓ ✓ Productive	NO	✓ ✓ Productive	✓ ✓ Productive
	<i>a:</i> 'to exist, happen, become, cause'	NO	✓ ✓ Productive	NO	✓ ✓ Productive	✓ ✓ Productive
Kannada <i>paTT</i> and <i>a:g</i>	<i>bidd</i> 'to fall'	NO	✓ Restricted	NO	NO	NO

	<i>paDu</i> 'to lie down, die, set, spend, experience, suffer'	unknown	unknown	unknown	✓ ✓ Productive	✓ ✓ Productive
	<i>a:gu</i> 'to happen, become'	✓ ✓ Productive	✓ ✓ Productive	NO	✓ ✓ Productive	✓ ✓ Productive

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A typology of conditional indexing

Katherine Walker & Eva van Lier
(University of Cologne & University of Amsterdam)

Keywords: typology, verbal indexing, differential argument marking

Approach – This paper represents, to the best of our knowledge, the first attempt at a systematic typological study of CONDITIONAL INDEXING across a large sample of languages, taking into account all three (in)transitive core arguments (S, A, P; see Bickel 2010), and various conditions, including referential factors (like animacy), discourse-based factors (like topicality) and lexical factors, i.e. (minority) verb classes. Earlier studies (e.g. Iemmolo 2011; Haig 2018; Just 2023) are restricted in terms of sampling, argument roles, condition types, or a combination thereof.

Conditional indexing contrasts with ‘canonical’ indexing, in which every verb in every context indexes a particular argument role with an overt marker from a dedicated paradigm; i.e., indexing is not subject to conditions (Corbett 2006: 9). In conditional indexing, then, a particular argument is not indexed – or is indexed differently – under certain conditions. For instance, the animacy of the P argument conditions indexing in (1): the prefix *ga-* is present only with a human P.

(1) Kamang (Alor-Pantar. Walker et al. 2023: 8)

- | | | | |
|---------------------------------------|-------------------------|--|--------------|
| a. <i>ge-dum=a</i> | <i>ga-faafa</i> | b. <i>taweng te-bini</i> | <i>faafa</i> |
| 3./e/-child=SPEC | 3./a/-search.for | in.turns CMN./e/-lice | search.for |
| ‘...[she] kept looking for the child’ | | ‘...[they] search for each other’s lice’ | |

Research questions – we investigate the frequency and spread of conditional indexing; look at whether and how specific factors are associated with conditional indexing of S, A, and P; and identify frequent combinations of different conditioning factors. Regarding referential factors in particular we address the difference between indexing and flagging observed in the literature on differential argument marking: while for flagging low-prominence A arguments and high-prominence P arguments (i.e. unexpected role-reference associations) tend to receive more marking, for indexing the effect is independent of role; i.e. any high-prominence argument is more likely to be indexed. Given the proposed reference-tracking function of indexing, especially discourse factors like topicality are expected to play an important role. (Iemmolo 2011; Just 2023; Haspelmath 2023)

Methods and data – We use a combination of two methodologies/data sources. First, we extracted languages with conditional indexing from the AUTOTYP database (Bickel et al. 2022), yielding a set of 179 languages. Second, we composed a customized sample of 83 languages with conditional indexing (one language per family from the AUTOTYP sample), which were studied in detail based on reference grammars.

Results – Apart from showing genetic and areal patterns, our results demonstrate that conditional indexing systems are very often multi-factorial, with lexical restrictions frequently involved. Also, while conditional indexing is attested in similar proportions for S, A, and P, different roles are associated with different factors. Whenever referential factors are involved, however, the predicted effect is observed: high-prominence arguments are more likely to be indexed for any argument role. Yet, topicality plays an unexpectedly restricted role.

Discussion – We interpret our results in light of existing literature on (conditional) indexing and differential argument marking more generally, in terms of the communicative function and grammaticalization of indexing. Also, we consider methodological implications of working with large-scale, open-access typological databases, and argue for their use alongside, but not instead of, in-depth language-by-language coding.

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A micro-typology of unusual polysemies: A view from low-land South American languages

Cristian Juárez
(Max Planck Institute for Evolutionary Anthropology)

Keywords: voice syncretism, causative-antipassive, causative-instrument nominalization, Gran Chaco languages.

Recent typological research on voice syncretism indicates that causative-antipassive polysemy is rarely attested across languages (Bahrt 2021, 100–103). Similarly, there is considerably less cross-linguistic knowledge about causative-instrumental nominalization, a type of polysemy slightly different from the more commonly observed causative-applicative syncretism (see, e.g. Malchukov 2016; 2019). Causative-antipassive and causative-instrumental nominalization co-expression types exist in two language families from the South American Gran Chaco region—Guaycuruan and Mataguayan. Although scholars working on individual languages of these families have reported each of these morphological co-expressions, a comprehensive and transparent comparative work, including all languages of these families, has not been carried out so far. This presentation aims to fill this gap by providing a micro-typology of these morphological syncretisms.

The first part of this presentation focuses on comparing these two polysemies, employing the methodological principles of a multivariate typology (Bickel 2011; 2015) to capture precise similarities and differences. Table 1 and Table 2 summarize, for example, the variation in form and meaning shared by the languages of the sample, showing cases of full and partial similarities in these specific domains.

Table 1. Correspondences in FORM and MEANING of the causative-instrument nominalization polysemy.

FAMILY	LANGUAGE	FORM	MEANING	SOURCE
Guaycuruan	Mocoví	-gat	CAUS.-INS.NOMLZ.	(Gualdieri 1998; Juárez 2023)
Guaycuruan	Toba	-gat	CAUS.-INS.NOMLZ.	(Censabella 2005; 2008)
Guaycuruan	Pilagá	-gat ~ -aʃat	INS.NOMNLZ.	(Vidal 2001)
Guaycuruan	Kadiwéu	-gad	CAUS.	(Sandaló 1997)
Mataguayan	Wichí	-hat	CAUS.	(Terraza 2009; Nercesian 2014)
Mataguayan	Chorote	-hat	CAUS-INS-OBJ.NOMLZ.	(Carol 2014)
Mataguayan	Maka	-hit ~ -het ~ -it	CAUS.	(Tacconi 2016)
Mataguayan	Nivacle	-xat	CAUS-INS.NOMNLZ.	(Fabre 2012; 2016)

Table 2. Correspondences in FORM and MEANING of the causative-antipassive polysemy.

FAMILY	LANGUAGE	FORM	MEANING	SOURCE
Guaycuruan	Mocoví	-gan	CAUS.-ANTIP.	(Gualdieri 1998; Juárez 2023)
Guaycuruan	Toba	-gan	CAUS.-ANTIP.	(Censabella 2005; 2008)
Guaycuruan	Pilagá	NA	NA	(Vidal 2001)
Guaycuruan	Kadiwéu	-gan ~ -gen	ANTIP?	(Sandaló 1997)
Mataguayan	Wichí	-yen	CAUS.	(Terraza 2009; Nercesian 2014)
Mataguayan	Chorote	-jan	CAUS.-ANTIP.	(Carol 2014)
Mataguayan	Maka	-hin ~ -hen ~ -in	CAUS.	(Tacconi 2016)
Mataguayan	Nivacle	-xan	CAUS.-ANTIP.	(Fabre 2012; 2016)

Despite clear similarities in form and meaning, likely influenced by long-term language contact among these groups, our understanding of the factors shaping the distribution and usage of these polysemic markers across the compared languages remains limited. For causative-instrumental nominalizations, for instance, preliminary observations show similarities and differences in the morphosyntactic patterns for forming causative verbs and instrumental nouns. While causative markers naturally apply

to intransitive predicates ((1c) and (2c)) in Nivaclé and Mocoví, creating instrumentals in Mocoví requires detransitivizing two-place predicates (via *-gan*) before nominalization (2b).

- (1) Nivaclé (Mataguayan)
- a. *yi-fôjôî* 'He/she scratches it.'
 - b. *lh-fôjôî-jat* 'His/her scratcher.' (INS, exs. a and b from Fabre 2012)
 - c. *yi-fôôî-jat-'in* 'The wind flew (it).' (CAUS, ex. c adapted from Fabre 2016, 311)
- (2) Mocoví (Guaycuruan)
- a. *n-qoin* 'He/she ties it up.'
 - b. *n-qoin-gan-gat* 'His/Her lasso.' (INS)
 - c. *i-pogo-gat* 'He/she cracks it.' (CAUS, examples taken from Juárez 2023, 101–3)

To conclude, I incorporate our micro-typological study into a broader comparison of these unique polysemies. I present results from an ongoing comprehensive comparative analysis that identifies instances of these two polysemic phenomena in languages across the Americas.

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A case for a split definition of clitics: Insights from Pukur

Neige Rochant
(University of Lausanne)

Keywords: Clitics; Typology; Phonology; Atlantic; Niger-Congo

The discussion about the definition of clitics has centred on whether it should incorporate prosodic criteria. The conventional definition characterizes clitics as syntactically free but prosodically bound (e.g., Halpern 1998: 101; Dixon 2007: 574; Booij 2012: 290; Bonet 2019; Ionova 2019: 22; Pescarini 2021: §1.1, cited by Haspelmath 2023: 30). Haspelmath (2023: 2) challenges this by defining the clitic as “a bound morph that is neither an affix nor a root,” explicitly excluding any prosodic characteristics. Influenced by Selkirk’s (1996) research on the prosodization of function words, which offers a suitable framework for describing various prosodic phenomena in Pukur (Niger-Congo), I contend that Haspelmath’s (2023) *grammatical* definition of clitics is aptly mirrored by a strictly prosodic definition. This proposal is in line with Klavans (1985), who argued that clitics can have different syntactic and prosodic hosts, but it differs as it focuses on the very definition of clitics. Hence, in the debate on whether clitics should be defined using both morphosyntactic and prosodic criteria, I propose a definition that incorporates both but separately, distinguishing *grammatical* from *prosodic* clitics. The prosodic clitic, which I define as a bound phonological sequence that is neither internal to a single prosodic word (i.e., a prosodic affix) nor a free prosodic word itself, corresponds to either of the following configurations (proposed by Selkirk’s (1996) as two of the three prosodizations of function words):

- a. (clitic (word)_ω)_φ [The prosodic clitic belongs to the same phonological phrase as a prosodic word, while being external to any prosodic word.]
- b. ((clitic (word)_ω)_ω)_φ [The prosodic clitic is located inside a higher-rank, yet outside a lower-rank prosodic word.]

While traditional definitions view clitics as grammatical words prosodized as affixes, this approach excludes grammatical words from the definition of grammatical clitics and prosodic affixes from that of prosodic clitics. It replaces the ‘intermediateness’ resulting from a mismatch between the grammatical and prosodic levels with an ‘neitherness’ (neither a word nor an affix) within either level. From a 6,5-hour transcribed and translated corpus of naturalistic Pukur field data, I demonstrate the utility of this split approach, which accommodates elements that are grammatical clitics without being prosodic clitics, and vice versa. In Pukur, numerous elements exclusively qualify as clitics at one level, either prosodic or grammatical, while being overlooked by a standard definition as they are not free grammatical words prosodized as affixes. For instance, I argue that the phonological phenomena affecting pre-verbal-stem inflectional morphemes, such as lenition, nasal sandhi and vowel assimilations, are aptly explained by a configuration where the stem, which cannot be a grammatical clitic by definition, functions as a prosodic clitic (1). Conversely, pre-verbal-stem inflectional morphemes forming prosodic words (hosts to prosodic clitics) qualify as grammatical clitics as non-roots that can be separated from the stem by a free adverbial word (2). Other examples include the verb ‘be,’ argued as a prosodic clitic and free grammatical word, and the adversative particle *taŋ*, a grammatical clitic and free prosodic word.

- (1) ((pō^mvōxó|)ω rùl)ω)φ
 pəŋ-f-k-á=tul
 1PL.SBJ-PF-3SG.OBJ-PRSREL=cook
 ‘We cooked it.’
- (2) ((^mbḡvá|)ω (sē̄|)ω jàl)ω)φ
 m-p-k-á=sé̄=jal
 1SG.SBJ-EPTH-3SG.OBJ-PRSREL=now=smoke
 ‘Now I’ll smoke it.’

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Reciprocal-sociative coexpression

Alice Bondarenko
(Stockholm University)

Keywords: reciprocal, sociative, polysemy, lexical semantics, grammaticalization

In some languages one and the same marker is used as a reciprocal ('each other') and as a sociative ('together'), exemplified here by the Yakut (Turkic) verb *ölör-üs* (kill-REC) 'to kill each other' or 'to kill someone together' (Nedjalkov 2007a: 237). My overarching project focuses on two research questions: 1. How widespread is reciprocal-sociative coexpression in languages of the world? 2. In languages with reciprocal-sociative coexpression, what factors affect the interpretation of these markers?

In this talk, I present the results of a pilot study of 39 languages that coexpress the reciprocal and sociative from 25 different language families. The data is collected from reference grammars, dictionaries, and other available literature.

Earlier literature discusses reciprocal-sociative coexpression in Oceanic (Moyse-Faurie 2008), Turkic (Nedjalkov 2004), Bantu (Bostoen & Nzang-Bie 2010) and a number of other languages (Lichtenberk 1985; Nedjalkov 2007b). My study demonstrates that reciprocal-sociative coexpression is found in a wide variety of genealogically and geographically diverse languages, see Table 1, but appear to be lacking in European languages.

Table 1: Number of languages in each macro-area

Macro-area	Number of languages
Africa	9
Australia	3
Eurasia	12
North America	6
Papunesia	8
South America	5

Coexpression can be realized in one and the same predicate, or, more frequently, the meanings can be complementary distributed, with certain predicates associated with certain meanings. A combination of the two is also possible: some verbs may be ambiguous while others are not. Earlier literature (e.g. Nedjalkov 2007a) has suggested several factors influencing the interpretation of these markers, of which lexical semantics and transitivity are the most important.

I explore how different predicates function with reciprocal-sociative markers across languages with these factors as a point of departure. Ingestion verbs stand out in two respects. It tends to be associated with the sociative function ('eat together' rather than 'eat each other') and if a reciprocal marker is only

marginally used with the sociative function, it tends to be with these verbs. For example, in Gayo, the circumfix *bersi-...-(n)en* is reciprocal (1a), but with ingestion verbs it functions as a sociative (1b).

(1) Gayo (Austronesian>Oceanic: Eades 2005: 162)

- a. ***Bersi-tipak-an*** *paké=a*
REC-kick-REC 3PL=that
'They kicked each other.'
- b. ***bersi-angas-an***
REC-chew.betelnut-REC
'to chew betelnut together.'

Transitivity is also relevant, since in some languages transitive verb bases form reciprocals and intransitive verbs form sociatives with one and the same marker. My current hypothesis is that reciprocal and sociative meanings can be thought of as a continuum of collective interaction, which involves transitivity but is not reduced to it. On one pole we find verbs that are not compatible with the reciprocal meaning. The other pole is associated with transitive verbs, more specifically a subset of transitive verbs with a patient argument that can also function as an agent. In this connection, I will discuss to what extent my data align with a hypothesis put forth by Kemmer (1996) that certain predicates, such as 'dance', 'play', 'compete', 'quarrel' and 'talk', function as an intermediate category and bridging context between the reciprocal and the sociative.

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Untangling the Balkans - insights from a typological dataset of the Balkans

Olivier Winistörfer

(University of Zurich) This research is part of the project

Keywords: Balkan linguistics, Language contact, Language typology, Indo-European linguistics, Turkish linguistics

For almost two centuries, linguists have extensively studied parallelisms in the languages of the Balkans that cannot be explained through genealogy, but through long-lasting intense language contact (Kopitar 1829, Trubetzkoy 1930). These ‘balkanisms’ (Seliščev 1925) were then often combined in lists (e.g., Lindstedt 2000, Tomić 2004, Friedman and Joseph 2017) to argue which languages are ‘members’ of the Balkan sprachbund and which languages should be considered ‘most Balkan’. These enterprises have often been criticized due to a certain argumentative circularity - as the included features were defined through the alleged Balkan languages and vice versa (Sobolev 2021/ Friedman and Joseph 2017). Recent studies (Winistörfer 2021), however, have suggested that in the case of the Romance and Slavic varieties in the Balkans, there is a significant typological overall proximity in the morphology, morphosemantics, morphosyntax, and syntax in comparison to their sister varieties. This is why I investigate the following research questions:

1. Can we observe a similar proximity also with more/other Indo-European (i.e. Albanian, Greek) as well as Oghuz Turkish varieties?
2. Does an expanded typological dataset support the idea of a ‘core’ of the Balkan sprachbund (Lindstedt 2000)? Or rather ‘layers’ (Gardani, Loporcaro, and Giudici 2021)?
3. Can this typological dataset uncover parallelisms unknown until now in the varieties of the Balkans (e.g., also the absence of patterns)?
4. Can such a dataset give us more insights into the distribution and mechanisms of alleged parallelisms in the languages of the Balkans?

To answer these questions, I have expanded the typological dataset of Winistörfer (2021) with different non-standardised and standardised modern-day Albanian, Greek, Romance, Slavic, Oghuz Turkic varieties of the Balkans as well as their sister varieties (23 in total). Although inspired by other state-of-the-art typological datasets like *WALS* (Dryer and Haspelmath 2013), *AUTOTYP* (Nichols, Witzlack-Makarevich, and Bickel 2013), *Grambank* (Skirgård et al. 2023), the dataset is based on binary values and is nested (hierarchical; comparable to a decision tree). Thanks to this approach, the dataset can account for the variation within one variety, but also describe the marking patterns in a much more detailed manner (to avoid overgeneralization/simplification). The dataset consists of 20 macro-variables, e.g., grammatical relations, number marking, polar question marking, clausal negation, etc., based on the idea of comparative concepts (Haspelmath 2010), together with around 250 subvariables (variables were not included/excluded because they were also mentioned in the comparative Balkan research).

The quantitative/qualitative analysis of the dataset shows that the situation in the Balkans is much more complex than often depicted. On the one hand, the dataset is not only capable of supporting and more precisely depicting traditionally mentioned parallelisms in the languages of the Balkans, but

also to uncover understudied parallelisms (e.g., in differential location marking, polar question marking). On the other, the dataset unveils diatopic trends which are only observable in certain parts of the Balkans (e.g., clausal negation). Hence, the dataset gives insights into the mechanisms of language contact and the history of the languages of the Balkans and their contacts.

This research is part of the project *The Balkan sprachbund reconsidered. A multi-variate, historicist approach to the 'prototypical' case of a sprachbund* funded by the Swiss National Science Foundation, SNSF (grant number: 203935).

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Distributional patterns in discourse functions of possessive markers across languages of Afro-Eurasia

Zahra Etebari
(Uppsala University)

Keywords: possessive markers, discourse function, definiteness, information structure, database

The paper introduces a new cross-linguistic database which aims to cover the controversial issue of the development of discourse functions in the possessive/personal markers of different language families in Afro-Eurasia. Possessive markers are typically used in order to refer to possessors, while in a number of languages they are developed to also denote functions that cannot be regarded as possessive, but as information structural or referential concepts such as contrast, emphasis, topicality, and definiteness. These developments have been mostly attested in and are known to be a feature of Uralic (Collinder 1957, 1960; Tauli 1997; Simonenko 2014) and Altaic (Grönbech 1936; Schlachter 1960; Schroeder 1999) families, but also recognized in Semitic (Armbruster 1908; Leslau 1995; Rubin 2010), Austronesian (Ewing 1995; Sneddon 1996), and recently Indo-European (Etebari et al. 2020; Etebari, submitted).

However, previous studies have shown variations in categorization of the developed non-possessive functions as well as confusions about their usage and origin which has led to debates (Johanson 1991; Fraurud 2001; Nikolaeva 2003; Stachowski 2010). Moreover, there is quite adequate existent descriptive work on this topic available, within language-specific philologies, but little attempt to go beyond the scattered case studies towards a larger synthesis. This comparative database adopts an overarching perspective that cuts across the boundaries of the language-specific studies in an attempt to identify recurrent patterns that unify the developments observed to date. The database establishes a thorough foundation for in-depth comparative typological investigations of non-possessive developments in Afro-Eurasia.

The talk provides a description of the database which includes the possessive markers of more than 60 language varieties from Uralic (Ugric, Permic, Mari, Mordvin, Samoyed), Altaic (Turkic, Tungusic, Mongolic), Indo-European (Iranic), Afro-Asiatic (Semitic), and Austronesian (Javanese, Malay) families that are developed to denote the discourse functions as well. Different functional and structural features of the markers are documented and sorted through investigating individual grammatical descriptions. The survey yields a detailed catalogue that represents genealogical and geographical properties as well as typological features of the languages, and grammatical and functional characteristics of about 130 possessive markers along with the sources' information. The database is aimed to be published with a CLLD (cross-linguistic linked data) web interface as a part of the CrossGram project. The platform provides a visualizing tool to generate list views of the inventory linked with digital maps regarding Afro-Eurasia as a linguistic area.

Based on this cross-linguistic function inventory, recurrent patterns for the distribution of each discourse function across the languages are presented and linked to the areal information through maps. In addition, the role of different linguistic factors, such as coding of possessive relations or position of the markers regarding host and case, in the development of various discourse functions are identified. The findings have considerable implications for understanding the complex web of

relationships between possession and information structural concepts. Besides, the areal perspective with the visualization of the spatial relations remarkably facilitates further study of contact-oriented changes in the development of the possessive markers.

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GS Language variation

On the cognitive underpinnings of actualization: A diachronic cross-varietal study on ongoing syntactic change in Spanish

Matti Marttinen Larsson
(Stockholm University; Humboldt-Universität zu Berlin)

The actualization of language change unfolds gradually across linguistic environments. Over the past decade, there has been growing recognition that actualization is largely driven by similarity-based generalizations – that is, by analogy (De Smet, 2012b). Moreover, frequently used structures often serve as analogical models, exerting a ‘gravitational pull’ that attracts other structures (De Smet, 2012a: 72). In other words, actualization through similarity-based generalizations is largely steered by frequency effects, and actualization hinges on usage and experience with language use.

In this talk, I address a somewhat overlooked aspect of actualization theory, namely that the input structures that are most frequent in one community may differ from the most frequent structures in another community (see also Fischer 2013: 528). Granted that analogy is sensitive to frequency effects, this discrepancy in input frequency of structures could, hypothetically speaking, result in variations in the substructures guiding the course of actualization across different varieties of a language (see e.g. Röthlisberger et al., 2017; Grafmiller et al., 2018; Verhagen et al., 2018; Barking et al., 2022). Since the cross-varietally potentially variable composition of probabilistic grammars has not yet been incorporated into actualization theory, the extent to which a determined course of actualization is community-specific cannot be predicted by actualization theory in its current form.

To address this issue, I adopt a usage-based perspective on actualization. I hypothesize that if domain-general cognitive mechanisms and processes along with usage factors steer the course of actualization, they should operate similarly across varieties of a language. This, in turn, would mean that the mapping out of change across linguistic contexts should largely align cross-varietally.

To test this prediction, I analyze an instance of ongoing syntactic change in Spanish, namely the conventionalization of definite articles in oblique relative clauses (*la casa en que nació* vs *la casa en la que nació*, ‘the house in which I was born’). Approximately 8000 oblique relative clauses from 19th-20th century Argentinean, Peruvian, and Colombian Spanish are analyzed using mixed-effects logistic regression to test the influence of cognitive and usage-determined factors, viz. the CONDITIONAL PROBABILITY of the antecedent lexeme, the NUMBER and LEVEL OF DETERMINATION of the antecedent, the DISTANCE between the antecedent and the relative clause, and the TYPE OF RELATIVE CLAUSE. Under a usage-based view of the actualization of this change (cf. supra), the prediction is that the new longer form should first be used to convey less accessible (e.g. unpredictable) meanings (Levshina, 2022: 135), and that, over time, the new form diffuses across contexts by spreading gradually across low-accessibility contexts towards high-accessibility contexts. Crucially, actualization should unfold in a similar manner in different varieties of a language.

The results confirm this hypothesis by showing that, in all of the analyzed varieties, change is initiated and led in contexts involving low accessibility. Over time, the new variant spreads significantly to contexts involving high-accessibility antecedents (e.g. adjacent, definite, singular, higher-frequency antecedents, and restrictive clauses). These findings provide robust support for a usage-based view on actualization with a strong cognitive commitment.

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Escape from dialect: How the new second person of ‘to be’ found a place in Colloquial Belgian Dutch

Anthe Sevenants
(KU Leuven)

Keywords: Dutch, diaglossia, corpus linguistics, social media, generalised additive models

In Belgian Dutch, expressing the second person singular ‘you are’ can be done through either the formal ‘jij bent’ from Standard Dutch or the informal ‘gij zijt’ used in Flemish dialects. A recent development in Colloquial Belgian Dutch (CBD) introduces a unique variant: ‘gij bent’, which combines the traditional ‘gij’ pronoun with the ‘bent’ conjugation from Standard Dutch. This form has sparked division among Flemish language users, with some finding it natural and others disliking its perceived contaminated nature.

The emergence of ‘gij bent’ in CBD can be traced back to northern Antwerp dialects (Ooms 2022). Interestingly, this form does not appear in Flemish dialects documented in the DynaSand database (Barbiers et al. 2006). To unravel the origins and prevalence of ‘gij bent’ in Flanders, I conducted a study involving the analysis of over 5000 posts from X (formerly Twitter). I geocoded all posts based on user profile locations, assigned gender to users with the help of a governmental dataset on first names, and distinguished between formal and informal posts by exploiting the implied formality difference between posts with general statements and posts mentioning others (‘pseudo-conversations’).

A logistic regression analysis reveals that ‘gij bent’ is predominantly popular in the Brabant dialect area. In addition, the model suggests a tendency for ‘gij bent’ to appear more frequently in posts with general statements than in conversational posts, implying a formality difference. Moreover, posts believed to be from women exhibit a higher usage of ‘gij bent’. To complement the regression analysis, a Generalised Additive Model was constructed, resulting in a heatmap illustrating the usage of ‘gij bent’ in Flanders. This heatmap reinforces the findings from the regression model, indicating that ‘gij bent’ is centred in the north of the Antwerp province and confined to the Brabant dialect area, without extending beyond Brussels in the south.

The fact that ‘gij bent’ emerged from northern Antwerp, an area not traditionally considered to be in a linguistic leadership role in Flanders (De Caluwe 2009), is peculiar. I contend that, although the form likely originated from northern Antwerp dialects, it may not have been initially recognised as such and was subsequently reinterpreted as an innovative, hybrid, and ‘less informal’ construction in CBD. The restriction of ‘gij bent’ to the Brabant area remains puzzling, but could be linked to the accelerated dialect loss specific to this region (De Caluwe and Van Renterghem 2011).

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Semantic Change and Variation in Ukrainian: A Corpus Study

Natalia Cheilytko & Ruprecht von Waldenfels
(Friedrich Schiller University Jena & Friedrich Schiller University Jena)

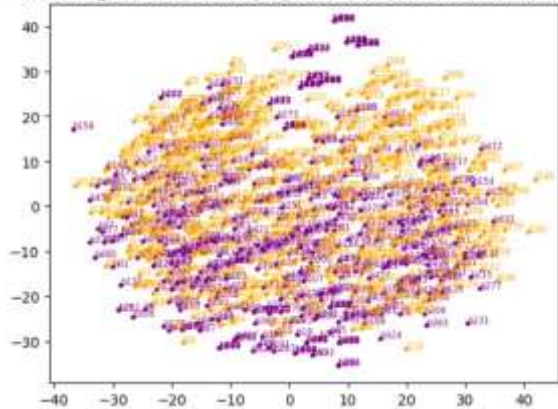
The paper presents the results of a corpus-based exploration of the Ukrainian semantic change and variation. Before WWII Ukrainian was a multi-standard language (using the Auer 2021 terminology) having active language contacts with neighboring Polish and Russian, which caused great variation at the time. Today due to intense and active war-driven processes within the country Ukrainian exposes a new wave of fast language development. Therefore the language dynamics observed in Ukrainian is a valuable field of examination for variationist sociolinguistics.

To get a bird-eye view on those trends in the XX - XXI century, we have developed an R&D workflow that is methodologically grounded on the Geeraerts et al. 2023. The aim is to explore interplay of semasiological, onomasiological, and lectal variation in Ukrainian based on the bottom-up distributional approach. The research questions are: how can we monitor the variation processes in the Ukrainian lexicon both synchronically and diachronically? What measures are reliable enough to reveal such changes?

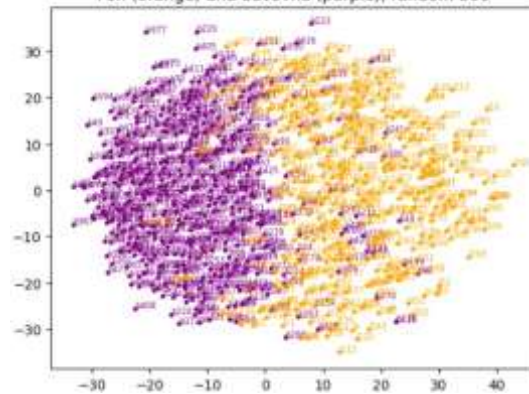
To automate identification of semantic changes of lexemes, we have developed an R&D pipeline with contextualized vector space models, multidimensional scaling, and k-medoids clustering techniques (Hilpert & Correia Saavedra 2020). It helped us to reveal how lexemes function over time and across different regions, and thus to obtain a more comprehensive view on variation and conceptual reorganization in Ukrainian. Data-wise the research uses the concordances from the following corpora: the GRAC (Shvedova 2020), the Ukrainian TenTen and the Ukrainian Trends (Jakubiček et al. 2013).

The proposed pipeline was successful to identify various cases of semantic changes. For example, it was sensitive for a rapid development of a fundamentally new sense for the noun *bavovna*. Traditionally this word had two meanings: 'cotton as a flower' and 'cotton as material'. Starting the war in 2022, this lexeme denotes a completely different idea of an explosion in media texts. The ground for the new sense stemmed from a creative rethinking of the fact that the Russian word *hlopok* (an equivalent for cotton, but also denoting a clap as a homonym) was widely used in the Russian media to veil and diminish the events of explosions. The plots below show the 2D view obtained with the Multidimensional Scaling technique for the contextualized vectors of 500 random occurrences for the words *bavovna* ('cotton'), another closely related noun *l'on* ('linen' as a material and a flower), and *vybuh* ('an explosion'). During 1960-2019 *bavovna* was used in quite similar contexts as *l'on*, which according to the distributional hypothesis indicates similarity of their meaning (the plot on the left). But starting the war 2022, their occurrences cluster apart (the plot on the right).

l'on (orange) and bavovna (purple), GRAC, 1960-2019, random 500

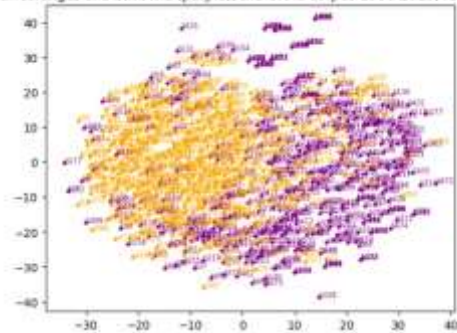


l'on (orange) and bavovna (purple), random 500

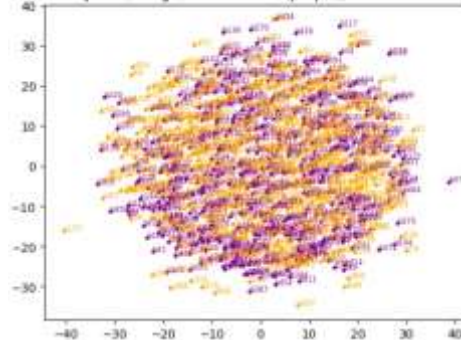


And the opposite picture for *bavovna* and *vybuh* - within 1960-2019 those lexemes were separate clusters (the plot on the left), but from 2022 they have similar usage (the plot on the right).

vybuh (orange) and bavovna (purple), the GRAC corpus 1960-2019, random 500



vybuh (orange) and bavovna (purple), random 500



Having such a lexical change monitoring pipeline for Ukrainian, it becomes possible to explore trends in the language development - region- and register-wise, and reveal how the semantic change characterizes the standardization process of Ukrainian.

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Hakka in East and West Timor: How and why do they differ?

Juliette Huber
(Humboldt-Universität zu Berlin)

Keywords: Overseas Chinese, Hakka, Timor, language variation, language change

Despite their obvious potential to inform research on language contact and change, the Sinitic language varieties spoken by Chinese-descended communities overseas have received little attention in linguistics. This talk focuses on the Hakka variety of the Chinese-Timorese, one of the least known and most remote Chinese-descended communities of Southeast Asia. It presents a case study of how linguistic divergence occurs within a small window of time and aims to identify the factors behind this divergence.

Timor is politically divided into Indonesian West Timor and independent Timor-Leste (East Timor). The island's partition is rooted in its colonial history, when the western half was controlled by the Dutch and the east by the Portuguese. For a long time the colonizers had limited control beyond a string of coastal settlements, and Chinese businessmen's trading networks spanned both halves of the island (Kammen & Chen 2019). By the early 20th century, it can be assumed that the border between the colonies had consolidated and the contacts between the ethnic Chinese of West and East Timor were becoming more restricted.

Little is known about the linguistic characteristics of Timorese Hakka to date. While speakers from both halves of the island can easily communicate, differences are nonetheless apparent, and most speakers report that they are able to identify another speaker as being from either East or West Timor. A selection of differences between East and West Timorese Hakka are shown in Table 1.

Table 1: Some differences between Hakka in West Timor and Timor-Leste

	Characters (simplified)	West Timor	Timor-Leste
'one'	一	[jɛt'5]	[jɪt'5]
'fish'	魚哩	[ŋ2-ŋi3]	[m2-ni3]
'pigeon'	月鸽哩	[ŋak'5 kap'6 pi3]	[ŋak'6 kap'5 pi3]
'for' (benefactive)	对 ~ 分 ~ 去	[tui3] ~ [pun1]	[tui3] ~ [hi4]

Based on a corpus of more than 130 interviews designed to study variation within Timorese Hakka, recorded in both Timor-Leste and West Timor, I identify differences between East Timorese and West Timorese Hakka. Two patterns can be distinguished: pervasive differences, on the one hand, where two variants are strongly associated with East and West Timor respectively; and on the other partial differences, where a variant is restricted to one half of the island, but coexists there with another variant found across the island.

I furthermore examine the factors which account for these differences, i.e.

- the adoption of forms originating from different Hakka dialects of China (Coblin 2019) ;
- contact with different local/dominant languages, i.e. Indonesian in the case of West Timor and Tetun in Timor-Leste;

c) internal developments which cannot unequivocally be attributed to language contact.

To conclude, I propose a tentative chronology of differentiation and suggest that the increased separation between Hakka speakers in the politically divided island has led to the consolidation of differences. In particular, language contact became a more prominent factor, and may lead to further divergence in the future (cf. Huber In press).

Acknowledgments

This research is funded by the German Research Foundation (Deutsche Forschungsgemeinschaft DFG), grant number 449959240.

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Creativity and regular productive word-formation: A case of the Latvian agentive suffix *-tāj-*

Andra Kalnača, Tatjana Pakalne
(University of Latvia & University of Latvia)

Keywords: productive derivation, affix polysemy, derivational semantics, creativity

Productive derivation is often characterised by affix polysemy, on the one hand (1a), and affix synonymy or near/ partial synonymy, on the other hand (1b). In addition to that, many meanings commonly expressed derivationally can also be expressed by grammatical/ syntactic means (e.g., Beard 1995). These two axes of flexibility, i.e. 1) one affix → various meanings or semantic feature combinations, and 2) one meaning → various formal means, create considerable room for creativity even within productive regular derivation, which otherwise appears to be almost 'automatic'.

- (1) a. N–N, ADJ–N, V–N
brāl-īb-a 'brotherhood', *spodr-īb-a* 'cleanliness', *virz-īb-a* 'movement, progress'
- b. ADJ–N
gudr-el-is, *gudr-iniek-s*, *gudr-īt-is*, *gudr-iķ-is*, *gudr-ul-is* 'one who is smart' < *gudr-s* 'smart'

Arguably, this kind of limited 'denotational flexibility' might have evolved in language due to an intrinsic need for some degree of freedom in choosing one's preferred means of expression simultaneously with the need to be understood correctly (which would be problematic were this flexibility unlimited) (e.g., Štekauer 2005, Körtvélyessy, Štekauer 2017).

The term affix polysemy tends to include, firstly, genuine affix polysemy, and, secondly, ranges of meaning that arise from: a) a high degree of semantic generalisation (underspecifiedness) of productive derivational affixes, b) the interaction of the semantic contents (the 'body') and grammatical features (the 'skeleton') of the base word and the affix (e.g., Lieber 2004, 2017), and c) further semantic enrichment that derivatives receive in context, which, in the past, have been often treated as polysemy when analysing and categorising lexical meanings found in derivatives with a particular affix.

The objective of the proposed study is, therefore, to explore the actual extent of the creative freedom that language speakers enjoy in expressing meanings within the semantic scope of regular productive derivation, as exemplified by the Latvian agentive word-formation pattern **V + -tāj- → N 'S'**. This presupposes: 1) analysing the semantics of *-tāj-* derivatives across different contexts and different classes of base verbs for salient features, such as ANIMACY, SPECIALISATION, SEMANTIC ROLE, TYPE OF ACTION, etc. to establish which features are relevant to which aspects of meaning (2); 2) evaluating the extent of freedom (availability of valid alternatives) speakers have in choosing their preferred formal means.

- (2) a. ANIMACY: *veicinā-tāj-s* ‘promoter, facilitator (can refer to a human, microorganism, organisation, substance, thing)’
- b. SPECIALISATION: *uzlabo-tāj-s* ‘enhancer, additive, improver with obj. (can refer to a specialised or non-specialised, animate or inanimate referent)’, *rakstī-tāj-s* ‘writer (can refer to a specific event, habitual activity or specialisation, i.e. occupation, as in *runu rakstītājs* ‘speech writer’; distinct from *rakst-niek-s* ‘writer (of books)’)
- c. SEMANTIC ROLE: *meklē-tāj-s* ‘seeker, searcher, search engine’ (agent, instrument), *slimo-tāj-s* ‘smb who is ill’ (experiencer), *atbaidī-tāj-s* ‘repellent or smb. who has frightened somebody away’ (causer, agent)
- d. TYPE OF ACTION: *staigā-tāj-s* ‘walker (may refer to a single specific action, repeated, habitual actions, prolonged state/ status based on actions, etc.).

The analysis is based on contextual uses of *-tāj-* nouns extracted from the corpora LVK2018 and LVK2022.

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Individual code-switching strategies in language shift: The case of Nanai and Ulcha

Natalia Stoyanova
(University of Hamburg)

Keywords: code-switching, language shift, Tungusic languages, Nanai, Ulcha

The paper presents a corpus-based study on code-switching in Nanai and Ulcha, two closely-related Tungusic languages, spoken in the Amur region. Both are in intense contact with Russian (the official language of the area) and highly endangered.

Structural types of code-switching in language shift are claimed to differ from those in balanced bilinguals. Myers-Scotton (2000: 104–105) postulates a special type of “composite” code-switching, which can break the rules formulated for the “classical” code-switching. Muysken (2000: 227–228; 247–248), who distinguishes three structural types of code-switching, namely insertion, alternation, and congruent lexicalization, predicts the expansion of insertion in language shift. Lipski (2014), in contrast, associates language shift with congruent lexicalization.

My data come from field texts created by modern speakers. They are fluent in Nanai/Ulcha, but nowadays use mostly Russian in their everyday communication. The texts were produced in Nanai/Ulcha under a special instruction “to tell a story in the native language and not in Russian”. However, the number of Russian fragments in the collection is high (ca. 19% of tokens are in Russian). Some of the attested switches look theoretically problematic, (1).

(1) Nanai (rchk_110807_VesennijObrjad)

každ-uju n'əŋn'ə taon-do-a-ni=a
every-F.ACC.SGspring every-DAT/LOC-OBL-3SG=EMPH
tuj-tuj pulsi bi-či-ni
so_so walk.PRS be-PST-3SG
'Every spring, he (shaman) used to walk in this way.'

In (1), the Nanai noun ‘spring’ takes two modifiers ‘every’, namely the Nanai *taondoani* and the Russian *každyju*. The Nanai modifier is in the dative-locative case, as expected for Nanai. The Russian modifier, instead, takes the accusative, which is used in such contexts in Russian. Moreover, it takes the feminine form: the corresponding Russian noun *vesna* ‘spring’ is indeed feminine, while in Nanai there is no gender at all.

At the same time, there is no unified specific structural strategy of code-switching characteristic of the whole collection: instead, a great variation across speakers is observed. In the paper, I assess this variation quantitatively.

Data: Oral texts in Nanai and Ulcha: 108,817 tokens; 53 speakers. All code-switches annotated manually, according to:

- length (word-internal~one-word~multi-word~clausal)
- morphosyntactic type (different constituents and non-constituent fragments: np, adj, adv, conj, disc etc.)
- matrix language of the corresponding sentence (Nanai/Ulcha vs. Russian).

Cases when the matrix language is difficult to identify and other problematic cases (see (1)) are marked separately.

Supplementary data: A comparable collection of texts in Russian (without code-switching) recorded from the same speakers. Manually annotated for morphological features deviating from Standard monolingual Russian (gender disagreement, nonstandard tense-aspect forms, etc.).

Method: Based on these data, I assess inter-speaker variation in code-switching and search for correlations with sociolinguistic parameters (such as year of birth, level of education) and with several measures presumably reflecting proficiency of a speaker in Nanai/Ulcha and in Russian:

- frequency of placeholders
- speech rate in Nanai/Ulcha and in Russian
- a morphosyntactic index showing to which degree the speaker's Russian differs from Standard monolingual Russian.

As a statistical technique, I use Principal Component Analysis and Hierarchical Clustering on Principal Components.

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Linguistic convergence and its drivers in Finnish dialects

Jenni Santaharju, Terhi Honkola, Perttu Seppä, Kaj Syrjänen, Unni Leino & Outi Vesakoski
(University of Turku, University of Helsinki, University of Helsinki, University of Turku, University of Helsinki & University of Turku)

Language diversity is affected by both linguistic divergence and convergence. Whereas linguistic divergence increases differences between the language varieties, linguistic convergence reduces differences between them (Braunmüller & House 2009; Hinskens et al. 2009). Both processes are important to understand how the present-day language diversity has developed. However, so far linguistic convergence has obtained less attention than linguistic divergence, probably because straightforward measures of linguistic convergence have been lacking.

Here we present a new approach from population genetics to measure linguistic convergence in Finnish. We will statistically challenge our new measure “linguistic flow” and use it to test two hypotheses on the drivers of linguistic convergence. According to the Isolation-By-Distance hypothesis, more linguistic convergence occurs between geographically close areas than distant ones, whereas according to the Isolation-By-Language hypothesis more linguistic convergence occurs between genealogically close language varieties than distant ones. We build an assumption that linguistic flow occurs through connections of speaker populations, and thus is a proxy of the past human contacts.

We defined both main dialect groups and regional dialects in Finnish by applying bayesian clustering approaches (Pritchard et al. 2000; Corander et al. 2003) to a 100-year-old dialect data (Kettunen 1940). We estimated how well the main dialect groups and the regional dialects within the main dialect groups explained the variation in Finnish, and estimated genealogical similarity between the regional dialects with a fixation index approach (ϕ ; Excoffier et al. 1992). We estimated linguistic flow by using the method of Tang et al. (2009) that was originally developed to measure gene flow between populations. Last, we tested the hypotheses on whether geographic proximity or genealogical similarity has driven linguistic flow with a model comparison.

Our results showed more linguistic flow within the main dialect groups than between them, and between the neighboring regional dialects than the non-neighbouring ones. We found more flow between regional dialects that were geographically close or genealogically similar. However, according to the model comparison, genealogical similarity between regional dialects was a more important driver of linguistic flow than geographical proximity. We will discuss the results in the light of earlier knowledge on Finnish dialects and the history of Finns, and discuss the applicability of this new approach to other kinds of language data and hypothesis testing.

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GS Spoken language

Functionally conditioned phonetic reductions in Czech continuous discourse

Pavel Machač & Mirjam Fried
(Charles University & Charles University)

Keywords: phonetic reductions, word reduction rate (WRR), topic-focus, spontaneous interaction, continuous discourse

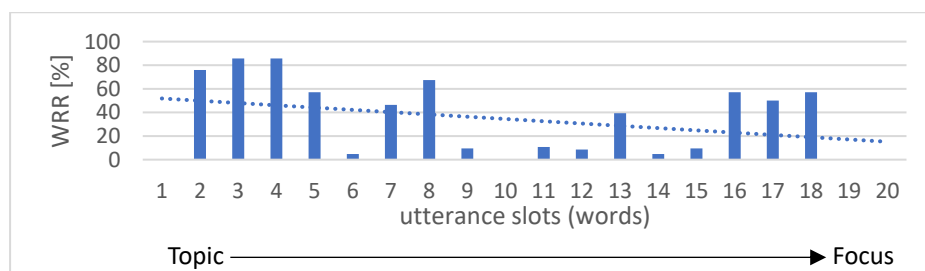
Spontaneous interaction is characterized by often massively reduced speech (e.g. Johnson 2004), which, however, doesn't generally compromise successful comprehension in the flow of continuous discourse. While reduced articulation can be partly due to inherent (in)stability and perceptual salience of certain phonetic features or full phonemes, the role of potentially diverse *non-phonetic* factors in the distribution of segmental/word reductions still awaits thorough and systematic examination. Targeting mostly individual words or short phrases, some limited lexico-syntactic conditions have been suggested (Tucker, and Ernestus 2016), but we propose to go further. Using naturalistic data, we work with the hypothesis that there are recurrent reduction patterns related to the complex grammatical, functional, and semantic organization of multi-clause utterances.

Our material comes from recordings of spontaneously produced conversations in Czech, a language wholly unexplored in this context. The basic units of analysis are 'utterances', defined as prosodically conclusive and syntactically and semantically coherent wholes (distinct from the notion of 'paratones' (Méli, Ballier, Falaise, and Henderson 2021)), and we use a particular method for calculating 'word reduction rates' (WRR; Zíková, and Machač 2014)) based on the (non-)realization of phonetic features, as opposed to just whole phonemes or their duration used in existing research.

An initial probe of 435 utterances suggests several non-phonetic sources of word reductions in the unfolding of a complete utterance. In this talk, we focus only on the functional dimension: Topic/Focus distribution, the status of utterance-initial position, and effects of content reformulation. We will report the following results: (i) Predictably, the reduction contour reflects the Topic(high WRR)-Focus(low WRR) distribution (1). (ii) The utterance-initial slot, defined syntactically, is intriguing in that it is always relatively unreduced, regardless of T/F, a particular lexical filler, or even the actual amount of reduction; it thus suggests a special (cognitive and/or discourse structuring) status, partially also mirroring the behavior of the utterance-final position. (iii) Content elaborations display greater overall reduction, regardless of T/F status (2); the numbers here show percentual distance from full articulation (note that words above 25% WRR are rarely and above 50% almost never identifiable in isolation, Machač, and Fried 2021)).

These findings indicate non-random and clearly multilayered motivations for reduced speech in continuous discourse, providing evidence that interlocutors rely *holistically* on all perceptual channels available, including certain conventionalized reduction patterns. In order to capture the fact that it is the rich multidimensionality that allows speakers to conserve articulatory effort without compromising the listeners' uptake, we propose that recurring reductions must be integrated in any generalizations that aspire to accurately represent speakers' complex interactional knowledge. Our results are the first step and call for examining other obvious dimensions, especially concerning utterance boundaries, such as any prosodic and/or gestural patterns associated with those positions or the relationship between utterances and paratones.

(1)



(2)

17 13 45 31 7 31 35 71 26
takováhle drobnost [taková vlastně věc kterou vlastně člověk nepotřebuje]
such trifle such DM thing which DM man. NOM.SG NEG.needs
'such a trifle, such a thing, really, one doesn't actually need'

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Variation in the reduction of the 1SG pronoun *ani* in spoken Hebrew

Leon Shor & Roey Gafter
(Achva Academic College & Ben-Gurion University of the Negev)

Keywords: phonetic reduction, pronouns, spoken Hebrew, usage-based research, variation

Alternations between full and phonologically reduced forms of personal pronouns, such as English *you* alternating between /ju/ and /jə/ (Siewierska 2004; Kibrik 2011), are typically understood as “governed largely by the dictates of phrasal phonology and may be affected by rate of speech and sociolinguistic factors” (Siewierska 2004: 26). However, few studies so far have quantitatively examined the distribution of full and reduced variants while considering both social and linguistic factors (cf. Saade 2018). We aim to address this gap by exploring the factors determining the distribution of reduced 1SG free pronouns in a corpus of spoken Hebrew.

In spoken Hebrew, the 1SG free pronoun *ani* alternates between a full variant /a'ni/ and two reduced variants, /an/ and /ni/, of which the former is by far more common. Recent corpus-based studies have suggested that the reduced realization of *ani* is primarily associated with verbs of cognition in the present tense (such as *jodea* ‘know’ and *χofev* ‘think’) and the presence of the negator *lo* following the pronoun (Polak-Yitzhaki 2004, 2007; Cohen 2016). In this study, we use a corpus of sociolinguistic interviews with 12 women (ages 24-68) from Tel Aviv recorded during 2012. We extracted all instances of 1SG free pronouns, resulting in 1271 tokens, each of which was coded as /a'ni/, /an/ and /ni/. We then used multivariate logistic regression modeling to determine the factors underlying the distribution of the reduced variants. Although the full realization (/a'ni/) was the predominant variant across all speakers (about 85% of the corpus), two statistically significant patterns did emerge.

First, the corpus internal frequency of the word following *ani* emerged as a significant predictor of reduced realization ($p < 0.01$). Notably, the negator *lo* is by far the most frequent word following *ani* in the corpus (257 of 1271 cases). Consequently, the previously observed preference for reduction before *lo* might ultimately reflect a broader tendency of reduction in sequences of commonly co-occurring words (Bybee & Scheibman 1999; Huback 2012). As in previous studies, the reduced realization most often occurred before verbs of cognition in the present tense. However, as such verbs are the most common verbs following *ani* in the corpus, once the frequency of the following word is controlled for, there is no evidence for a statistically significant effect of either tense or verb type on the reduced realization of *ani*.

Second, age emerged as a significant predictor ($p < 0.01$), indicating that older speakers exhibited a lower likelihood of employing reduced forms. Crucially, age interacts with the word following *ani* – among the older speakers, virtually the only reduced realization is *an* followed by *lo*. Taken together, these findings suggest that the reduced variant /an'lo/ may be represented in the mental lexicon as a multi-word string.

Our results highlight the intricacy of pronoun reduction patterns, which can only be uncovered by quantitative research in a corpus of naturally occurring speech. Notably, in our data it appears that older and younger speaker do not just have quantitatively different patterns of reduction, but rather, different linguistic constraints.

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Prosodic reduction of parentheticals in spoken Russian discourse

Nikolay Korotaev

(Russian State University for the Humanities; Institute of Linguistics RAS)

Keywords: prosody, spoken discourse structure, parentheticals, articulation rate, pitch range

It has often been stated that in spoken discourse parenthetical elements tend to exhibit patterns of prosodic reduction that make them stand out of the context. Parentheticals can be uttered at a higher tempo, in a lower voice, with a reduced pitch range, and so on; see, inter alia, Dehé (2014: 35ff) for a review. Corpus-based studies of these tendencies have been conducted for various languages, including English (Dehé 2014), French (Baqué et al. 2016), Italian (Saccone, Trombetta 2021), Brazilian Portuguese (Santos, Bossaglia 2018), Catalan (Payà 2003), and others. However, prosodic accounts on parentheticals in Russian mostly rely on read-aloud data (Grenoble 2004), or don't provide quantitative results (Kibrik, Podlesskaya 2010). I seek to fill this gap using data from two prosodically annotated corpora of spoken Russian narratives: "Stories about presents and skiing" (<http://spokencorpora.ru/>) and "Russian Pear Chats and Stories" (<https://multidiscourse.ru/main/?en=1>).

Following Lelandais and Ferré (2014), I define a parenthetical sequence as comprising of three units: an antecedent (A), a parenthetical (P), and a resumption (R); where A and R belong to the main line of discourse, and P wedges in between and provides a temporary deviation therefrom. Also, I concentrate on cases where parentheticals (i) form (at least one) intonational group of their own, and (ii) are pronounced with a falling or level pitch accent. See the example below, in which the antecedent and the resumption have rising accents (marked $-\uparrow$ and $/\uparrow$ in the transcript), and the parenthetical has a level accent ($-$).

A: u nego sletaet $-\uparrow$ šljapa,
at he.GEN flies.off hat

()

P: ($-\text{vetrom}$ eë vidimo snosit,)
by.wind it.ACC apparently blows.away

()

R: i velosiped nataalkivaetsja na bol'šoj $/\uparrow$ kamen' posredi dorogi,
and bicycle bumps into big rock in.the.middle road.GEN
mal'čik $-\uparrow$ padaet,
boy falls

'His hat flies off [his head] — apparently, it is blown away by the wind — and the bicycle bumps into a big rock in the middle of the road, and the boy falls down'.

A total of 165 parenthetical sequences were retrieved from the corpus data. In all of them, parenthetical units were compared independently against antecedents and resumptions for two prosodic parameters: articulation rate and pitch range. Articulation rate was measured as milliseconds per phoneme. Pitch range was calculated using Praat's (Boersma, Winnik 2023) pitch objects, with values of the 10th and 90th percentiles taken as lower and upper bounds, respectively. The results were as follows. All four measurements revealed statistically significant prosodic reduction. Parentheticals were pronounced faster than both antecedents ($p < 0.05$, Cohen's $d = 0.19$) and resumptions ($p < 0.01$, $d = 0.29$), and with

a narrower pitch range than both antecedents ($p < 0.0001$, $d = 0.86$) and resumptions ($p < 0.0001$, $d = 0.80$). Judging from the considerable differences in effect sizes, these findings are in line with results previously obtained for German (Bergmann 2012) and Mandarin Chinese (Tseng et al. 2018), as pitch reduction provides the most prominent prosodic cue for identification of parentheticals in spoken discourse.

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Reduplicative patterns in spoken Italian: A corpus-based investigation

Simone Mattiola
(University of Pavia)

Keywords: reduplication, repetition, morphosyntax, Italian, corpus-based

Reduplication (“the repetition of part or all of one linguistic constituent to form a new constituent with a different function” Inkelas 2014: 169, e.g.: Indonesian *búku > búku~búku* ‘book > books’, Cohn 1989: 185; Tohono O’odham *pado > pa~pado* ‘duck > ducks’, Fitzgerald 2001: 942) is largely investigated in linguistic literature from very different perspectives (from typological and descriptive/language-specific, to cognitive perspectives because of its – presumptive – iconic nature, etc.), and this produced a considerable amount of knowledge about this phenomenon, in all its manifestations, in many languages (cf., among many others, Moravcsik 1978; Rubino 2005; Hurch ed. 2005; Stolz et al. 2011). Traditionally, reduplication is considered to be rather widespread worldwide with the exception of Europe “where reduplication does not play a role in morphology” (Rubino 2005: 23). However, as already noted by Stolz et al. (2011: 100ff.), this leaves out syntactic Total Reduplication (sTR) which is considered by Stolz et al. (2011) themselves as a proper reduplicative pattern mainly because of functional similarities and the difficulty to define what a word is and thus properly identify a clear-cut boundary between morphology and syntax (cf. Haspelmath 2011 and Tallman 2020 a.m.o and also Author(s) Paper for what concerns this issue related to reduplication). Syntactic TR, however, is a quite frequent device in European Indo-European languages (E-IE) partially contradicting Rubino’s (2005) statement. Despite this, reduplicative patterns remain poorly described in E-IE languages (with some exceptions, e.g., Wierzbicka 1986, Thornton 2023) and basically none of these studies has described this phenomenon in spoken varieties and through a corpus-based investigation.

This presentation tries to partially fill this gap focusing on sTR found in spoken Italian. To do so, we extracted all the occurrences of repeated elements from the sociolinguistically-informed KIParla corpus (<https://kiparla.it/>, Mauri et al. 2019) composed of about 1 million tokens. The dataset counts 4639 sTR occurrences, and each of these occurrences has been tagged according to some formal and functional-semantic parameters of analysis but also for some extralinguistic parameters listed below:

- Formal:
 - Number of copies ($2 \leq x$: 2, 3, 4, etc.), lexical category of the base (noun, verb, adjective, interjection, etc.), feature of the base (noun: masculine/feminine, singular/plural; verb: TAM features, actional class; adjective: grade; etc.);
- Functional-semantic:
 - Type of function (discourse/textual vs. grammatical), function of the reduplicative pattern (discourse/textual: disfluency, reformulation, etc.; grammatical: continuative, intensive, plural, etc.);
- Sociolinguistic variables:
 - social/geographic characterization (diaphasic, diastratic, diatopic usage).

From this will result a descriptive typology of reduplicative patterns in spoken Italian that will tell us the degree of vitality and productivity of such a device in a modern E-IE language, also taking into

consideration its extralinguistic characterization (usage). The presentation will also show how reduplicative patterns show much more formal and functional variation than previously thought and how this impact on the general theory of reduplication and its relationship with iconicity (cf., Author(s) Paper). To do so, we will compare spoken Italian situation to the general cross-linguistic descriptions of reduplication we have at our disposal (see references above).

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GS Pragmatics

Prosodic augmentation via lengthening of secondary articulations in Piaroa (Jodī-Sáliban)

Jorge Emilio Rosés Labrada
(University of Alberta)

Keywords: prosody, augmentation, secondary articulation, iconicity, Amazonian languages

The use of vowel lengthening to convey duration, especially when associated to ideophones, is widely recognized as an example of iconicity (Downing and Stiebels 2012; Guerrini 2020). For instance, in the following Makah (Wakashan; ISO: myh), increased vowel length on the last syllable conveys information about the duration of the walking event.

(1) $\acute{\lambda}i\bullet\etaawe\bullet\bullet\bullet t$
'Waaaaalking.'

(California Languages Archive, LA52.019 – LaChester, 00:08:06:298-00:08:10:338)

Analyzing similar uses of length (as well as of high pitch excursions) in Upper Tanana (Athabaskan), Lovick (2023:382–92) labels this phenomenon “prosodic augmentation”. Instances of prosodic augmentation in the literature are not rare; however, they usually concern lengthening of vowels (and sometimes consonants). In this presentation, I show that prosodic augmentation can be accomplished via lengthening of secondary articulations rather than of entire segments. I do so by focusing on examples of prosodic augmentation in Piaroa (Jodī-Sáliban; Colombia/Venezuela; ISO: pid), where certain adverbs and quantifiers are prosodically augmented through a process of lengthening secondary articulations associated with voiceless stops. The data used here stems from a narrative corpus collected as part of an ongoing documentation project.

Piaroa voiceless stops have a three-way manner distinction: plain (p, t, k, k^w), aspirated (p^h, t^h, k^h , and possibly k^{hw}) and ejective (p', t', k', k'^w)—see Krute (1989, 41), *inter alia*. In certain contexts, voiceless stops are pre-aspirated, as for instance in the adverbs *recuo* [re^hk^wo] ‘some/a lot of time’ and *otto* [o^hto] ‘far’. This pre-aspiration can be lengthened to convey an increase in (time) duration or distance, respectively. Examples (2) and (3)—and their corresponding figures—show this for *recuo*. In (2), *recuo* is prosodically augmented and the speaker holds the pre-aspiration for 1.268 seconds. This is visible in Figure 1 where *recuo* is considerably longer (despite being only two syllables) than any other word in the sentence. In (3), by contrast, *recuo* is pronounced without prosodic augmentation: pre-aspiration duration is only 0.121 seconds and there is a more balanced length distribution across words as seen in Figure 2.

(2)	<i>recuo</i>	<i>ghuḡru</i>	<i>ttḡjḡcuḡḡ</i>
	re^hk^wo	$\ddot{a}w\text{-}\ddot{a}r\text{-}u$	$t^h\ddot{i}\text{-}h\text{-}\ddot{o}k^w\text{-}\ddot{a}\eta\ddot{a}$
	long.time	drink-DUR-NFIN	3PL-stand-?-TAM

<i>ghuḡru</i>	<i>ttöjɔcuḡʔ</i>	<i>ghuḡru</i>	<i>ttöjɔcuḡʔ</i>
ãw-ãr-u	t ^h i-h-õk ^w -ãʔã	ãw-ãr-u	t ^h i-h-õk ^w -ãʔã
drink-DUR-NFIN	3PL-stand-?-TAM	drink-DUR-NFIN	3PL-stand-?-TAM

‘they were drinking, drinking, drinking a loooong time’ (Babel037)

(3) *recuo* *‘chɔcɔ* *päjj’cɔ*
 re^hk^wo ts’-õk-ɿ p-ãhĩ-k’-ã
 some.time go-NEG-NFIN COP-NMZ?-AFTER-CL:MASC
 ‘after not going for some time’ (Babel019)

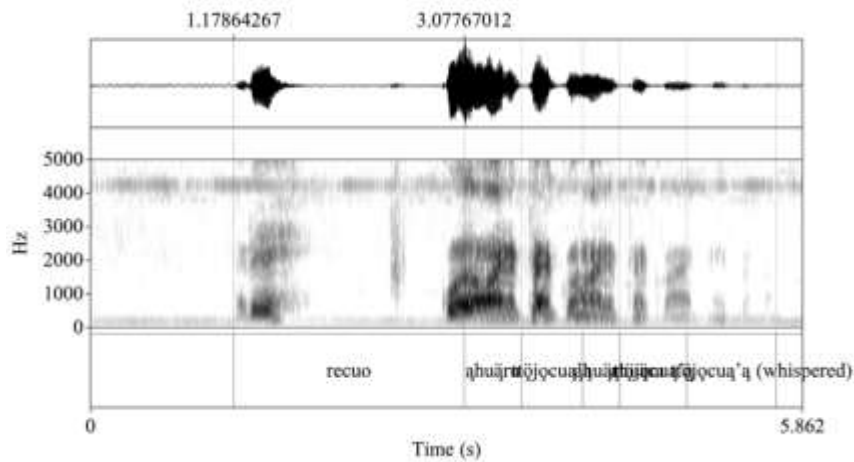


Figure 1 Prosodically-augmented *recuo* (Babel037: 00:19:45.712-00:19:51.574)

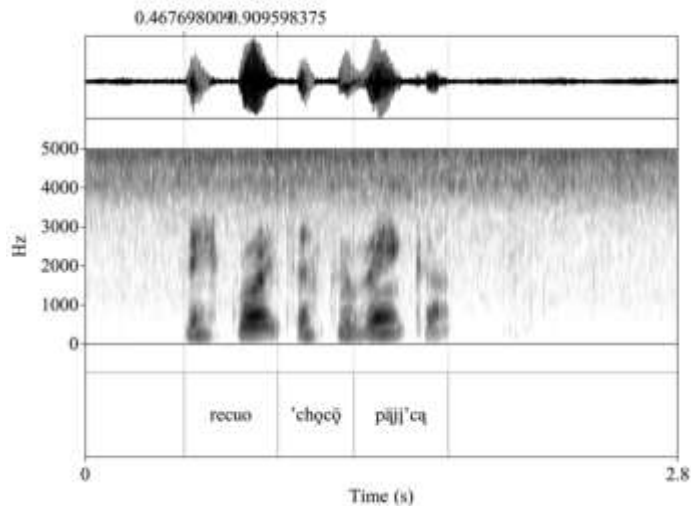


Figure 2 Non-prosodically-augmented *recuo* (Babel019: 00:02:01.063-00:02:03.863)

Similarly, the quantifiers *o’cajuiyönä* /*(o)k’ah^widʒinæ/* ‘everything’ and *o’catoinä* /*(o)k’atoinæ/* ‘everyone’ are prosodically augmented by increasing the duration of the ejective release associated with *k’*, as illustrated in Figure 3.

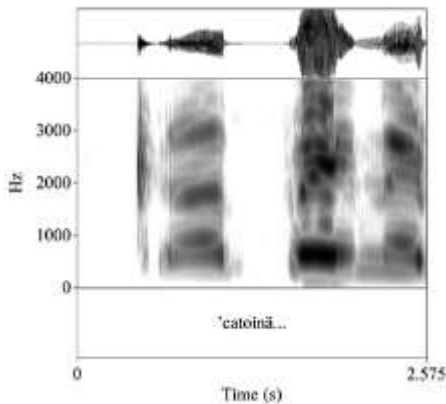


Figure 3 Strongly released ejective in *o'catoinä* (part of Babel030: 00:11:26.404-00:11:28.979)

Analyzing these and other examples of Piaroa prosodic augmentation, I conclude that Piaroa speakers can manipulate secondary articulation features of voiceless stops for expressive means. This presentation thus expands our understanding of prosodic augmentation by showing that the iconic increased length associated with this phenomenon can target consonants—more specifically, articulatory subcomponents of consonants—as well as vowels, and contributes to iconicity and expressiveness studies more generally.

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Differential Argument Marking through Communicative Pressure: An Experimental Study

Jesse Holmes
(University of Tartu)

Keywords: differential argument marking, artificial language learning, communicative pressure, typicality, ambiguity avoidance

Many languages exhibit differential argument marking (DAM) systems in the form of differential object or subject marking (DOM, DSM). Functional explanations, such as ambiguity avoidance (Bossong 1985 and Dixon 1994) and predictability-based marking (e.g., based on animacy; Haspelmath 2021 and Levshina 2021), have been proposed to account for the cross-linguistic similarities in the parameters that govern these systems within a communicative efficiency framework (Gibson et al. 2019). Several studies have attempted to test these proposed driving forces of DAM (specifically DOM), looking either for evidence of ambiguity avoidance (Fedzechkina et al. 2012) or predictability-based marking (Tal et al. 2022) using artificial language learning experiments. While the results of these studies remain inconclusive, their methodologies suffer from the same limitation: they only test one-sided sentence production and not communication (where the sentence produced needs to be understood by a listener), which may be an important factor in the driving forces of DAM. This study attempts to address this issue by using a communication game and to test the emergence of DAM more comprehensively by investigating both DOM and DSM via animacy and information structure.

Two artificial language experiments were designed, one in which participants learn a language with DOM and another in which participants learn a language with DSM. The artificial languages are taught to participants with unfixed word order (50% SOV and 50% OSV) and argument marking that occurs randomly (i.e., irrespective of animacy and information structure) in only 50% of transitive sentences, rendering the languages communicatively inefficient. The languages feature 8 nouns (4 animate and 4 inanimate), 3 transitive verbs, and 2 constructions, an existential construction and an interrogative construction, which are used to manipulate information structure (given/topical vs. new/focal). Following two days of training, participants are given a comprehension test to determine how they interpret the argument structure of unmarked sentences. Participants exposed to the same language are then put into pairs and play a communication game in which one participant uses the language to describe pictures of transitive events to their partner, who then selects a corresponding picture of the described event. Their comprehension and the grammar (i.e., marking and word-order preferences) developed during communication are then analyzed according to the animacy and information structure of arguments. Accordingly, the comprehension of unmarked sentences is expected to rely on typicality, and in communication, less typical arguments are expected to receive more marking (i.e., DOM: animate/topical objects, DSM: inanimate/focal subjects), with word-order preferences being dependent on information structure (i.e., topical first).

Data collection is currently underway, meaning that as of now there are no empirical results to present. 80 participants will be included in total (40 for DOM and 40 for DSM), and logistic mixed effects regression will be used to analyze the results. We believe that the anticipated outcomes, based

on our proposed methods, hold significant promise for contributing valuable insights to understanding the emergence of DAM.

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Syntactic Markers of Depression and Suicidality

Guido Seiler, Eyal Liron Dolev, Nina Klee, Sarina Blaser, Carlo Berther, Stephanie Homan & Birgit Kleim

(University of Zurich, University of Zurich, University of Zurich, University of Zurich, University of Zurich, University of Zurich & University of Zurich)

Keywords: information structure, syntax, depression and suicidality, Swiss German

Introduction: There has been a growing interest in language as a predictor of suicidality. A recent systematic literature review by Homan et al. (2022) showed that all existing studies examined either prosody or lexis, but none used morphosyntax. Reliable predictors of suicidality are currently still lacking and a more refined linguistically informed approach including syntactic markers could lead to better prediction and models to forecast suicidality.

Research Question: To what extent can syntactic features be predictive of depression and suicidality?

Approach: Constituent order in Swiss German (GSW) is variable, depending largely on pragmatic (information-structural) preferences. Therefore, syntax, being a source of variance that is non-existent in other domains (e.g. inflectional morphology or morphophonological alternations), is an attractive domain to examine inter-individual production differences.

Method: We present a novel way of operationalizing syntactic variance based on 10 features. We calculate correlations between syntactic variance and depression/suicidality severity. We put particular focus on pre-field markedness.

GSW, like Standard German, is a V2 language: In the matrix clause of a declarative sentence, the finite verb is the second element. The constituent preceding it is dubbed “pre-field” (German *Vorfeld*). Virtually any constituent type can occupy the pre-field position, including subordinate clauses. Prototypically, the topic of a sentence is its subject (Hockett 1958, p. 201), and the pre-field is one of the preferred positions for topics (Musan 2010, p. 35). We thus categorize pre-fields not occupied by the definite subject as marked pre-fields (see Examples (1)-(3)). Pre-field markedness is calculated as the proportion of marked pre-fields out of the total number of pre-fields.

- | | | | | | |
|-----|-------------------------------|-------------------|------------------|------------------|----------------|
| (1) | [_{PRE-FIELD} | <i>Ich</i>] | <i>ha-s</i> | <i>geschter</i> | <i>gmacht.</i> |
| | | <i>I</i> | <i>have-it</i> | <i>yesterday</i> | <i>made</i> |
| (2) | [_{PRE-FIELD+MARKED} | <i>Geschter</i>] | <i>han-i-s</i> | <i>gmacht.</i> | |
| | | <i>Yesterday</i> | <i>have-I-it</i> | <i>made</i> | |
| (3) | [_{PRE-FIELD+MARKED} | <i>Gmacht</i>] | <i>han-i-s</i> | <i>geschter.</i> | |
| | | <i>Made</i> | <i>have-I-it</i> | <i>yesterday</i> | |
- “I did it yesterday.”

Data and Results: We analyzed 10 randomly selected GSW interviews with patients hospitalized at a Zurich psychiatric clinic (Sels et al. 2021). Additionally, for each patient, depression and suicidality levels were measured using Beck Depression Inventory-II (BDI-II) (Beck et al. 2011) and Beck Scale for Suicide Ideation (BSS) (Kliem et al. 2017). A negative correlation between pre-field markedness and

these measures was found: the more depressed and/or suicidal a patient, the less marked their pre-fields.

Discussion: The German pre-field fulfills central information-structural functions such as frame setting, topicalization, or focalization (Frey 2005). Managing information structure, i.e., the packaging of information for common ground management, requires the speaker to infer the temporal mental states of the addressee (Chafe 1976, Krifka 2007), i.e., to accommodate to what the addressee putatively knows and thinks. This mind-reading ability, dubbed “theory of mind” (ToM) (Premack & Woodruff 1978), has been shown to be decreased in depressive and/or suicidal subjects (Nestor & Sutherland 2022, Nestor et al. 2022). Thus, if (i) ToM is required for managing information packaging and (ii) depression/suicidality impairs ToM, then active management of information structure is expected to be affected by depression/suicidality. Reduced pre-field markedness indeed hints at an association between mental health and information structure management abilities.

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Exploring Implicit Persuasive Techniques in Political Discourse: Comparative Analysis of Politicians' Speeches and ChatGPT-generated Texts

Davide Garassino, Nicola Brocca & Viviana Masia
(ZHAW; University of Applied Sciences, University of Innsbruck & Roma Tre University)

Keywords: political discourse, presuppositions, ChatGPT, comparative analysis, persuasion.

Human communication aims to influence beliefs “by design” (Mercier & Sperber, 2017) and, in certain usage contexts, the conveyance of non-*bona fide* true (i.e., questionable or blatantly false) content can turn persuasion into manipulation (Reboul, 2017). In particular, it is well recognized that certain linguistic strategies, such as implicit communication, may convey potentially manipulative content effectively (Sbisà, 2007).

Lately, the worldwide success of Large Language Models has raised concern, as they can be easily exploited for spreading manipulative content, such as fake news (Burtell & Woodside, 2023; Goldstein et al., 2023a, b). This is even more concerning since distinguishing between human and model-generated news has proven to be challenging for users and machines alike (Kreps et al., 2022; Chaka Chaka, 2023).

This study aims to explore the connection between implicit meaning and potentially manipulative content, with a focus on political communication, known for containing non-*bona fide* true implicit content (Lombardi Vallauri & Masia 2014; Garassino et al. 2019, 2022). Specifically, we delve into non-*bona fide* true presuppositions – conveyed by means of different presupposition triggers, such as definite descriptions (*The black cat*), factive predicates (*It's strange she could not be here*), change-of-state verbs (*John stopped telling lies*), among others - as well as vague expressions whose meaning is likely to be under-determined in certain contexts of language use (as is the case of some qualitative adjectives or common nouns).

For the investigation, we compare texts from Italian, French, and Spanish politicians with those generated by ChatGPT on polarizing topics, such as immigration and attitudes towards the European Union. We consider six politicians representing diverse views on each topic: Emmanuel Macron vs. Marine Le Pen for France, Giorgia Meloni vs. Nicola Zingaretti for Italy and Pedro Sánchez vs. Santiago Abascal Conde for Spain. Their chatbot ‘versions’ are generated by ChatGPT 3.5.

This exploratory study poses several research questions:

- (a) How similar are the chatbot versions of politicians to real French, Spanish and Italian politicians?
- (b) Is the frequency of presuppositions and vagueness strategies comparable in original texts and in ChatGPT-generated texts?

- (c) Is the discourse function (i.e., attack, praise, stance-taking, etc., cf. Garassino et al. 2019, a.o.) of presuppositions and vagueness strategies in Chat GPT's texts similar to that performed by the same strategies in real politicians' texts?

To date, comparative analyses of real and automatically generated texts belong to a newly emerging line of research which sees Artificial Intelligence (AI) as an extremely impacting tool interfering with the way we use and understand language. The human-like performances of AI texts should therefore be properly heeded to avoid falling in the dangerous trap of manipulative interactions. We hope that this work might constitute a valuable preliminary path in this direction and, also, in the direction of further delineating the pragmatic potentialities of AI-based language models.

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Elicitation experiments on Differential Object Marking reveal grammatical differences between Brazilian and European Portuguese

Albert Wall
(University of Vienna)

This paper reports quantitative data from an experimental elicitation task on Differential Object Marking (DOM) in Portuguese, testing several predictions from the literature. Portuguese DOM, the marking of some direct objects (DOs) by a preposition-like element (*a*) is decreasing in use since the 18th century (Gibrail 2003). It has even been claimed that DOM does not exist anymore in the modern language (Döhla 2014:279). However, Cyrino (2017) argues based on intuitional data that in Brazilian Portuguese (BP), DOM is possible and may occur in certain contexts, sometimes serving as a disambiguation device. According to her, in (1), without *a*-marking, the initial left-dislocated DO could be interpreted as the subject. In (2), a coordination structure, DOM is only possible in the reading in which the speaker saw the teacher and the boy, not when speaker and teacher saw the boy. (3) displays an animacy contrast (well-known in the literature on DOM, see Kabatek et al. 2022) with certain indefinite quantifiers. In (4), DOM is only possible when the comparative refers to Rita, not Pedro. Thus, in (1), (2) and (4) *a*-marking is claimed to exclude certain otherwise available interpretations.

(1) (A) homem pobre não se rouba.

DOM man poor NEG REFL rob-3SG.PRS
'Poor people are not to be robbed.'

(2) Eu vi o menino e (a)o professor também.

I see-3SG.PRS DET boy and DOM+DET teacher too
'I saw the boy, and the teacher, too.'

(3) Ele visitou (a) alguns homens / (*a) algumas escolas. He

visit-3SG.PRF DOM some men DOM some schools
'He visited some men / some schools.'

(4) O Pedro ama a Rita como (a) uma mulher. DET

P. love-3SG.PRS DET R. like DOM a woman 'Pedro
loves Rita like a woman.'

This paper reports results of several empirical tests of the above-mentioned claims from Cyrino (2017). Furthermore, the same tests were conducted with speakers of European Portuguese (EP) for comparison. 44 Speakers of BP and 48 speakers of EP (university students from other disciplines than linguistics and literature) participated in an oral production task with a 2X2 within-subject and 2X2 between-subject Latin square design, in which each of the four above-mentioned constructions was elicited with eight different lexical realizations, resulting in 32 elicited sentences per participant. The task was to complete a simple sentence with some linguistic material displayed on a screen within a given context, thereby controlling the exact interpretation of the sentence.

Results show that DOM is used in all contexts in PB and that indeed speakers employ it as a disambiguation device. From all tested constructions, left-dislocation displays highest frequency in BP. However, the animacy contrast in (3) is only documented with the universal quantifier *todos*, not the indefinites. In EP, DOM only occurs robustly with the universal quantifier and marginally with left-dislocation, and generally with lower frequency than in BP. Based on these results, the paper argues that DOM seems to be more fossilized in EP, and that in BP, the data must be accounted for at the syntax-semantics-pragmatics interface.

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The evolution of climate change discourse in the Polish press (2015-2022)

Dagmara Mateja, Zuzanna Falkowska, Przemysław Szyk & Tomasz Malinowski
(University of Warsaw, University of Warsaw, University of Warsaw & University of Warsaw)

Keywords: climate change, collocation, Usage Fluctuation Analysis, discourse analysis, corpus linguistics

This research examines the evolution of climate change discourse in the Polish press between 2015 and 2022. It examines how media narratives have evolved in the context of significant environmental and political events that have occurred during this period. The project combines corpus-based discourse analysis (Baker 2006; Gabrielatos and Baker 2008; Jaworska and Krishnamurthy 2012; Baker et al. 2013; Wang 2018; Liu and Huang 2022) with the technique of usage fluctuation analysis (UFA) (Baker et al. 2017; Brezina 2018; McEnery et al. 2019, 2021; Gillings et al. 2023). The UFA technique enables the identification of statistically significant shifts in word usage over time by tracking the fluctuation in word usage manifested by collocation. The study employs a rigorous methodology to analyse the frequency and context of the terms "climate change" and "global warming" in a targeted corpus of Polish media.

The corpus comprises articles published in the Polish press between 1 January 2015 and 31 December 2022. It includes those from the daily newspapers *Gazeta Wyborcza*, *Rzeczpospolita* and *Gazeta Polska Codziennie*, as well as weekly newspapers. The analysis in-depth examines the discourse on climate change in the newspapers *Newsweek*, *Polityka*, *Wprost*, *Do Rzeczy* and *Sieci*. In order to achieve this, a specialised corpus was created, consisting of 19,429 texts (17,048,660 tokens). The corpus was developed by our team using the most up-to-date methodology, which relied on machine learning algorithms to analyse large data sets. This approach identified patterns and themes related to climate change without explicitly mentioning these terms, thereby enabling the identification of a broader range of relevant content.

Preliminary research indicates a shift in the manner in which the Polish media approach climate issues. Initially characterised by limited engagement and scepticism, the Polish media are now engaging in a more dynamic and well-informed debate on the issue. This trend is consistent with the global increase in climate change discourse.

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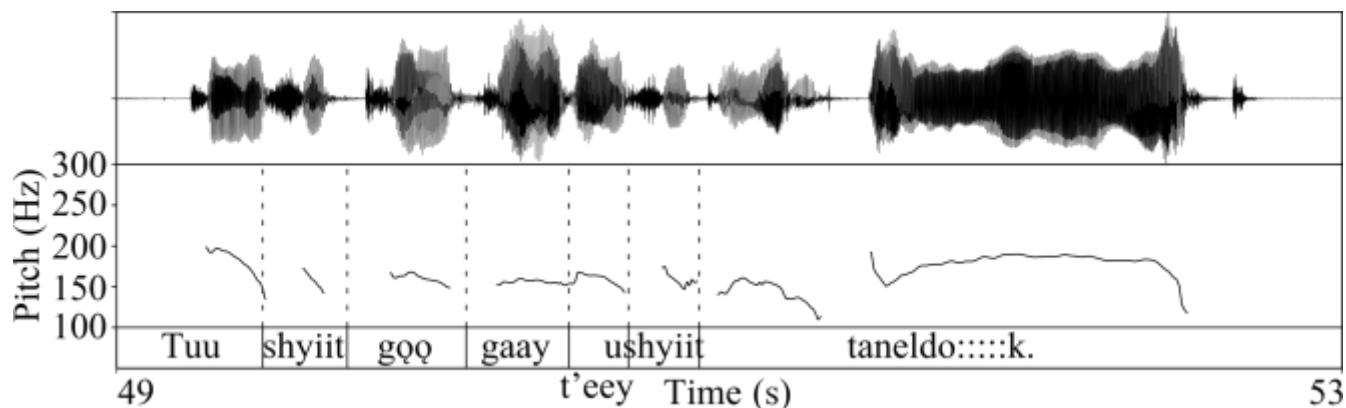
Prosodic augmentation in Upper Tanana Dene

Olga Lovick
(University of Saskatchewan)

Keywords: prosody, pragmatics, sound symbolism, evaluation

Upper Tanana is a Dene (Athabaskan) language spoken by fewer than 50 mostly elderly individuals in eastern interior Alaska and the western Yukon Territory. The data for this study comes from narrative discourse collected primarily by me. In this talk, I describe the functions of a speech pattern dubbed “prosodic augmentation” (Lovick 2023), which is characterized by drastic lengthening of the stem syllable, with augmented syllables typically three to five times as long as non-augmented ones. This is often accompanied by raised pitch. In the practical orthography, prosodic augmentation is marked by colons following the vowel. The wave form and pitch track below show the enormous lengthening of the verb stem; the pitch is not raised (much) in this example but is kept unusually steady across the vowel.

- (1) Tuu shyiit gəḡ gaay taneldo::::k.
Water in bugs small they.were.crawling.around
‘In the water little bugs were crawling around in a disgusting way.’



This pattern is first mentioned by Jetté (1907) as a strategy to express superlatives in Koyukon, and by Tuttle (2018) as an intensifying device in Ahtna and Lower Tanana (all three are Alaskan Dene). I show here that its functions are. With adjectives and verbs describing property concepts, prosodic augmentation expresses that the quality expressed is present in abundance (1). With other verbs, it can express increased intensity (2a), increased speed or distance (2b), repetition (2c), or evaluation (1).

- (2a) Shneh'j::h. vs. Shneh'jh.
‘He looked at me long and hard.’ ‘He looked at me.’
- (2b) Altha::::! vs. Alttha!
‘She was running as hard and far as she could!’ ‘She was running!’
- (2c) Shudehka::t. vs. Shudehkat.
‘He kept asking me questions.’ ‘He asked me a question.’

With nouns, prosodic augmentation signals abundance (3a). When applied to directional adverbs (3b), it indicates increased distance. With other adverbs (3c, d), it intensifies the meaning.

(3a)	Ji:::gn hq̄t̄jj. 'There were lots of berries.'	vs.	Jign hq̄t̄jj. 'There were berries.'
(3b)	ahne:::gn' 'a long way in the upland direction'	vs.	ahnegn' 'in the upland direction'
(3c)	t'axo:::h 'finally, after a long time'	vs.	t'axoh 'finally'
(3d)	k'at'ee:::y shyah'eh'aak NEG they.always.make.noise 'they absolutely never make a noise'	vs.	k'at'eeey shyah'eh'aak 'they never make a noise'

Prosodic augmentation is clearly an iconic pattern, where some sort of semantic is signaled through increased duration and raised pitch of the stem syllable. In this way, it mirrors common functions of reduplication as outlined originally by Sapir (1921), although it is a prosodic rather than morphological strategy. Functionally, it can be classified as being part of the evaluative domain (Grandi & Körtvélyessy 2015).

This speech pattern is highly characteristic of Upper Tanana: it is ubiquitous in narratives and often carries over into English discourse. It is also very salient to speakers and learners alike. For them, study of this topic is important as it validates their own perceptions of their language. For the field of language description, studies like this are important as they highlight the multifaceted functions of suprasegmental information.

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Inference and assumption: The view from Finnish adverbs and modals

Seppo Kittilä & Elsi Kaiser
(University of Helsinki & University of Southern California)

Keywords: Assumption, evidentiality, Finnish, inference, modals

To contribute to our understanding of different evidence types and their linguistic encoding, this paper deals with evidence labelled as [+PER][-DIR] in Plungian's (2010) paper on evidence types, namely *inference* and *assumption*. When inferring or assuming something, people rely on their personal sensory perception (*inference*) or general knowledge (*assumption*) [+PER], in the absence of direct evidence [-DIR] (e.g. Aikhenvald 2004: 64 and Plungian 2010: 37)

We investigate the semantics of three Finnish expressions related to assumption and inference: (1) the inferential adverb *näköjään* ('apparently,' derived from the root *näkö-* 'sight') and (2) the assumptive adverb *varmaan* (from epistemic adjective *varma* 'sure, certain'), and (3) the modal verb *täytyy* ('must'). In doing this, we go beyond prior work (e.g., Kittilä 2024) which did not consider *täytyy*. We find that the [+PER][-DIR] evidence type is very versatile, and that use of the three expressions differs along multiple dimensions, including how strong the evidence is, how much responsibility the speaker is willing to take for the claim and whether the speaker wants to signal epistemic authority.

We conducted a questionnaire study with 15 scenarios. 58 Finnish speakers (from Seppo Kittilä's course 'Introduction to linguistic and phonetics') indicated which expression they prefer for each scenario, and could explain their choices. We used this method because we are interested in subtle differences and the motivation of use, which are very hard to study from corpora. The 15 scenarios differed, for example, according to the evidence strength (see Matthewson 2020) and whether the evidence was concretely available.

The results indicate that inference and assumption are not homogeneous or synonymous (Cf. De Haan 2001). Rather, each linguistic expression has its own semantics, which determines its use and highlights the heterogeneous nature of [+PER][-DIR] evidence. Our results indicate that *näköjään* is best considered an inferential particle, and *varmaan* an assumptive particle (see also Kittilä 2024), while *täytyy* lies somewhere between these two evidence types. *Näköjään* requires the speaker to have concrete, observable evidence for the claim. However, evidence strength matters; the evidence has to be strong enough that the speaker can vouch for the truth of the claim: *näköjään* signals an inference rooted in strong evidence. In contrast, *täytyy* can be used with weaker evidence: It indicates that the evidence leaves some room for speculation, and that an inference *or* an assumption is being made: *täytyy* occurs with both inferences and assumptions rooted in weaker evidence. Finally, our data suggests that *täytyy* and *varmaan* differ in that *täytyy* requires a stronger commitment by the speaker than *varmaan*: by using *täytyy* the speaker communicates that they find the occurrence of the event rather likely; *varmaan* leaves more room for speculation/uncertainty. Furthermore, with *täytyy* the speaker considers him/herself to be the epistemic authority, while *varmaan* is more neutral.

In sum, our findings echo crosslinguistic work on evidentials showing that the information source is relevant for choosing the appropriate evidential, but crucially the Finnish data reveals that speakers' fine-grained subjective choices also play a very important role in this process.

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Verbless Sentences from a Contrastive Corpus Approach

Antonina Bondarenko
(Université de Caen; Université Paris Cité)

Keywords: verbless sentences, semantico-pragmatic features, information structure, corpora, contrastive analysis

This paper explores the semantico-pragmatic features of English and Russian verbless sentences, i.e. structures in which the typical marker of sentential status – the finite verb – is absent. Integrating corpus methods, contrastive linguistics and enunciative analysis, we study the use of English verbless sentences in a 1,4-million-word parallel and comparable corpus of dialogue-based 19th–21st century fiction (anonymized, 2021; 2019). Persuaded that cross-linguistic comparison can make evident linguistic constraints that remain hidden from a monolingual perspective, we examine the phenomenon in English and Russian, two languages with profoundly different typological characteristics regarding the verb. Contrastive methodology (Guillemin-Flescher, 2003), in which a particular linguistic phenomenon has traditionally been studied from the perspective of a manually-analyzed series of translation correspondences, is combined with recent progress in digital corpora, natural language processing and statistical tools. Potential pitfalls of parallel-texts studies (e.g. Nádvorníková, 2017; Stolz, 2007; Baker, 1996) are addressed through corpus design and multi-directional analysis.

The findings presented develop the semantico-pragmatic portrait of a prototypical verbless sentence in the two languages. A statistical correlation with deictic and indexical lexical markers reveals that verbless sentences depend more on *common ground* knowledge for their resolution than verbal sentences. Amongst the several functions identified through key-word and n-gram analysis, the marking of *indefinite reference* is found to be a statistically key feature that distinguishes verbless and verbal sentences in English, e.g. (1)–(3).

- (1) He moved his eyes quickly away. *What a strange meeting on a strange night.* He remembered nothing like it save one afternoon a year ago [...]
- (2) Rakitin evidently wanted to speak his mind. “*A crime in your nice little family.* It will take place between your dear brothers and your nice, rich papa.”
- (3) “*To a duel!*” the old fool screamed again, breathless and spraying saliva with each word.

Furthermore, contrastive corpus analysis shows that the variation between the presence and the absence of the verb is a particularly sensitive issue for English in *questions*, where it is found to use absence as a grammatical marker of *indirect* speech acts.

The contrastive corpus method also reveals pragmatic explanations as to why Russian has twice as many verbless sentences as English. Rather than syntactic or semantic recoverability, we identify pragmatic differences between the two languages concerning (a) topic activation (English appears to re-active the topic which correlates with the realization of the verb), and (b) the marking of the difference between direct and indirect speech acts in questions, which explain some of the frequency differences in the use of the phenomenon in the two languages.

Finally, we also explore the implications of our results for the theoretical debate concerning verbless structures in language (e.g. Merle, 2009; Elugardo & Stainton, 2005). In particular, taking a contrastive approach to syntactic ellipsis (McShane, 2000) and information structure (Lambrecht, 1994) gives us new empirical grounds for defending a conversationally implicated propositional meaning for structures without a syntactic predicate, and leads us to elaborate a model of the sentence that strives to be capable of accounting for the verbless phenomenon.

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GS Methodology of linguistic research

What's wrong with logistic regression?

Freek Van de Velde
(KU Leuven)

The main workhorse in quantitative variation-and-change linguistics today is logistic or generalized linear regression. In case of diachronic research, time is treated in such regression models 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 and many, many more). Logistic regression may not always be the most adequate approach, though. In this talk, I will discuss a number of problems, like (i) autocorrelation, (ii) the difficulty in treating wavering back-and-forth changes, (iii) the uneven distribution of observations over different time periods, (iv) the Procrustes bed of binary outcomes, and (v) the misuse of random effects. Various alternatives have been proposed to solve (parts of) these problems, like lasso regression (Van de Velde & Pijpops 2021; Van de Velde et al. 2021) for problem (v), binomial-coefficient regression (De Smet & Van de Velde 2019) for problem (iv), survival analysis for problem (i) (Van de Velde & Keersmaekers 2020), and multistate Markov models (Krylov 1995) for problem (i)-(iv).

As a concrete illustration of an alternative to binary logistic regression, we investigate the competition between the strong and weak preterite inflection in the West-Germanic languages. Strong verbs build their preterites with Ablaut (root vowel alteration), as in (1); weak verbs build their preterites with a dental suffix, as in (2). The morphological strategy is lexically determined, but some verbs display wavering patterns through time and space.

- (1) *drink* ~ *drank* (strong preterite)
- (2) *work* ~ *worked* (weak preterite)

Based on an extensive dataset of 250,000 corpus observations from Old Dutch to Present-day Dutch (De Smet & Van de Velde 2020), we set up a multistate Markov model (Van de Velde & De Smet 2022), that alleviates problems (i)-(iv). As Cuskley et al. (2014) have shown, historical corpus data on English defy a straightforward trend of a monotonic transition from strong to weak, as is often assumed. Our Markov Model allows for non-monotonic changes, and takes into account lexical replacement, without losing the main benefit of binary logistic regression, namely its multifactorial design. We show that the model yields plausible results, when compared to earlier work on this well-researched trend, and that it may be used for forecasting. This is not to say that Markov Models are a one-size-fits-all panacea, but our illustration goes to show that historical linguistics may benefit from methodological innovation.

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Closing in on overabundance: Combining corpus-based and experimental methods

Pamela Goryczka & Irene Fally
(University of Vienna & University of Vienna)

Keywords: overabundance, verb morphology, conjugation, augment, Italian

Overabundance has been well described in Italian verb morphology (Thornton 2011, 2012), however how this rivalry between competing forms came about, why (and to what extent) these forms are still in competition, remains unclear, although different degrees of diachronic, diatopic and stylistic variation play a role (Thornton 2011, Da Tos 2013 and Maiden 2018). This paper addresses the realization of overabundance in Italian third conjugation verbs. These verbs in *-ire* are a classic example of overabundance: some verbs have an augment in addition to a theme vowel which can be obligatory (1a), absent (1b) or optional (1c) in the inflectional paradigm.

- (1) a. *finire* 'end' > (io) *finisco* '(I) finish'
- b. *dormire* 'sleep' > (io) *dormo* '(I) sleep'
- c. *applaudire* 'applaud' > (io) *applaudisco* vs. (io) *applaudo* '(I) applaud'

According to recent theoretical analyses, *-isc-* is a "purely morphological" (Aronoff 1994) element that functions as a strong identity marker for third conjugation verbs (Da Tos 2013, and Goryczka 2022). Despite this heightened iconicity and the high frequency of verbs of type (1a), Thornton (2011, 2012) observes that in Contemporary Italian overabundant cells containing the *-isc-* augment are rare. Her data thus point to a gradual loss of overabundance, suggesting that in this case overabundance is "just a transitional phase during diachronic change".

We examine this claim by looking at this phenomenon from two angles: diachronically, to understand to what extent there is ongoing change, experimentally, we investigate whether there is a (processing) advantage for *-isc-* as a conjugation class identity marker. For this purpose, we conducted a corpus study, examining the occurrence of type (1c) verbs in two complementary diachronic corpora of Italian, MIDIA (Iacobini et al. 2014) and CODIT (Micheli 2022), focusing the 18 verbs investigated by Thornton (2011) documenting realized overabundance in diachrony (Aigro and Vihman 2023). Second, to test to what extent *-isc-* is perceived as identity marker by speakers today, we investigated preferences (i) in doublets as in (1c), and (ii) a potential extension of the augment to all third conjugations verbs through an acceptability judgement task. Speakers were asked to rate constructed sentences in present indicative containing each verb either with or without the augment, in 1SG or 3PL (e.g., *Mento* vs. *Mentisco soprattutto a me stesso/a*. 'I mostly lie to myself'). If the augment functions as identity marker, we expect a preference for the verbs with augment especially for learners of Italian, as this may help in the identification of the conjugation class.

First results from our diachronic corpus study suggest a higher degree of overabundance than observed for Contemporary Italian, which supports the idea of overabundance being a transitory phenomenon. This is further corroborated by the results from the acceptability experiment: native speakers show a clear preference for augment-free verb forms. However, the L2 data show that at early stages of language learning the augment is indeed used to identify conjugation class. Overall, this appears to indicate that it is the speakers (different speaker groups) themselves that ensure that overabundance remains fairly stable over time.

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GS Evidentiality

The development of English evidential sentence adverbs: Position and prominence in a usage-based approach to language change

Diana Lewis

(Aix Marseille University and Laboratoire Parole et Langage)

Keywords: evidentiality, sentence adverbs, English, discourse prominence, grammaticalization

English has developed a range of modal sentence adverbs, many of which have evolved from adjectives via VP adverbs and are sometimes said to have grammaticalized. This study traces the evolution of the English evidential sentence adverbs *clearly* and *obviously* in the light of recent approaches to grammatical change that emphasize the role of discourse prominence (Jasinskaya et al. 2015, von Heusinger and Schumacher 2019, Boye and Harder 2021). The two adverbs are chosen for their broadly similar trajectories (adjective > VP adverb > sentence adverb), polysemies (manner, modal) and distributions in Present-Day English (PDE) (pre-verbal, left and right peripheries). Both, as PDE evidential adverbs, express primarily deduction and inference (Kemp 2018: 755-757). Examples (1) and (2) are from the Spoken BNC-2014.

- (1) a. and she works in politics so she's *obviously* around those kind of people (SKKB)
b. A: yeah went to the right school *obviously* B: he must have done (SD8A)

- (2) a. well it's *clearly* gonna be cheaper otherwise it wouldn't be a set meal (S985)
b. what did you even learn in AS level history <name>? [...] nothing important *clearly* (SHJE)

The aims of the study are, firstly, to compare the evolutions and current usages of *clearly* and *obviously* and, secondly, to evaluate the idea that sentence adverbs are lexical items occupying discourse-secondary slots and may grammaticalize in the sense of conventionalizing this secondary status (v. Wiemer 2014, Boye 2023). The data are taken from British English: historical data are drawn from the CLMET corpus, the Old Bailey corpus, the Corpus of English dialogues and the EEBO collection; PDE data are taken from the British National Corpus (1980s) and the Spoken BNC-2014.

The diachronic study shows an increase in subjectivity and abstraction: from observation to deduction to inference (from the physical world towards the mental world). It reveals two main (related) differences in the development of the adverbs. First, the pace of change differs: while *clearly* emerges as a sentence adverb about a century earlier than *obviously*, the latter evolves much faster, exploding in frequency at the end of the twentieth century (cf. Tagliamonte and Smith 2021). Second, while *clearly* maintains its manner/modal polysemy in PDE, manner *obviously* has become relatively rare and usage has extended further beyond evidentiality into wider interpersonal functions such as relevance hedging.

A sentence adverb in left-peripheral position puts the idea-unit in its scope into focus, while in right-peripheral position it backgrounds the idea-unit in its scope relative to an adjacent idea-unit (Haselow 2013, Ariel and DuBois 2022), both positions being low prominence relative to the idea-unit. There is thus evidence of a grounding function. It is sometimes argued that because sentence adverbs can be modified, they cannot be grammatical (Boye and Harder 2021: §3.6). But in practice they are not readily modified, suggesting reduced 'lexicality' in the sense of referential content. The evidence points to ongoing change in the direction of greater abstraction of meaning and gradual ongoing shift to positions of low relative discourse prominence for both adverbs (more advanced for *obviously*, with vagueness linked to high frequency).

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Evidential choices for describing internal states in cross-linguistic perspective

Satu Keinänen
(University of Helsinki)

Keywords: evidentiality, internal states, egophoricity, first-person effect, nonvolitionality

This paper examines how evidentials are used to describe internal states: physical and psychological experiences and feelings, as well as cognitive and mental states and processes. These include for example sensations of pain, emotions, likes and dislikes, and describing one's thoughts. Evidentials are grammatical markers of information source (e.g. Aikhenvald 2004), and their application to internal states is not always straightforward, since the ways to observe one's own internal states are different from observing other people's states, and in either case, these states are not necessarily externally observable.

Previous research, like Aikhenvald (2004) and Tournadre and LaPolla (2014), associates internal states with visual or direct and nonvisual evidentials when referring to one's own internal states, and with inferential evidentials when referring to other people's states, but especially non-first person internal states have received less attention. To study the evidentials with both first and non-first persons' internal states, I analysed how the use of evidentials with internal states is presented in the descriptions of about 60 languages. Different patterns of usage were compared in typological-functional framework. The results show that the previous generalizations can be complemented by considering the structure of the evidential system and the semantic extensions of evidentials. Additionally, there are interesting parallels with first-person effect phenomenon.

The overall tendency is to mark first-person internal states with sensory evidentials, but not with the most direct evidentials of the language. Many languages, Hup for instance, use nonvisual instead of visual evidential (Epps 2008). I found that the choice of second-most direct evidential is clear especially in languages where egophoricity is marked as well, since such languages do not normally use egophoric marking but most likely a direct or visual evidential for first-person internal states, like in Taku (Sun 2018). For non-first persons, the internal states are typically marked with inferentials or other indirect evidentials: Hup, for instance, uses inferential and reportative (Epps 2008). In some languages sensory evidentials are also possible, usually because the other person's state might be partially observable (for example in Yolmo and Tucano, see Gawne 2013, Ramirez 1997) or because questions anticipate the evidential the addressee will use in their reply (for example nonvisual in Hup, Epps 2008).

Moreover, the evidential choices for first-person internal states resemble closely the patterns found in first-person effect, when evidentials have additional meanings of nonvolitionality with first person (see e.g. Curnow 2002, 2003, Sun 2018). Internal states, such as emotions, are often non-volitional and/or uncontrollable: usually people cannot instigate or stop them. Some languages, like Taku and Tucano, have the same evidentials for first-person effects and first-person internal states (Sun 2018, Ramirez 1997). By comparing evidentials used with internal states and with first-person effect, it is possible to form a more detailed view on what are typical or deviating uses of evidentials and how person interacts with evidentiality.

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Volition as a source of evidentiality: New insights from the Indo-European family

Francesca Dell’Oro
(University of Neuchâtel)

Keywords: volition, evidentiality, diachrony, Indo-European family, speech and thought report

The investigation of the pathway from volition to evidentiality has been almost exclusively limited to the case of German *wollen* ‘want’ > ‘say’ (or ‘claim’, depending on the context). Cf.

(1) *Er will damals gehört haben, daß [...]*
He want-3SG then heard have-INF that

“He says to have heard at the time that [...].” (Zeit 74, adapted from Diewald 1999: 225)

Three main hypotheses for the pathway from volition to evidentiality in German have been suggested by Diewald (1999: 424–428), Fritz (2000) and Remberger (2023), respectively. While it is known that the phenomenon is not limited to German (cf. Goldschmitt 2007 for French), progress has been constrained by a focus solely on exact equivalents, i.e., constructions showing subject co-referentiality and past time reference of the reported event. The main goal of this paper is to show that the diachronic pathway can be better assessed first taking into account the semantic change of the volitional verb – shown by ex. (2) to (5) from Latin, Ancient Greek and Old German – and then combining the findings with morpho-syntax and pragmatics in order to provide a fine-grained classification. Moreover, as historical data from languages beyond German (cf. especially ex. 3) appear to support Remberger’s (2023) hypothesis of a doxastic base in the pathway of German *wollen* (want > think > say), it is mandatory to discuss this hypothesis from a diachronic corpus-based perspective that integrates other languages exhibiting the same phenomenon.

(2) Latin

se [...] ortum antiqua Teucrorum a stirpe volebat
he-ACC born-ACC ancient-ABL Teucrian-GEN.PL from stock-ABL want-PST.IPFV.3SG

“he said that he was sprung from the Teucrians’ ancient stock” (Vergil, *Aeneid* 1, 626), preceded in the text by ‘lauded’ (*ferebat*).

(3) Latin

vero sine corpore ullo deum vult esse [...]
really without body-ABL any-ABL god.ACC want-3SG be-INF

“He says that god is entirely incorporeal.” (Cicero, *De natura deorum* 1, 33), preceded in the text by ‘says that not’ (*neget*) and ‘thinks’ (*censeat*).

(4) Ancient Greek

autoi de Arkádes ethélousin eĩnai
pron-NOM.PL adv A.NOM.PL want-3PL be-INF

“they claim that they are themselves Arcadians” (Pausanias 1.4.6), preceded in the text by ‘they say’ (*phasín*).

(5) Old German

bediu uuellen genuôge . daz taneos sî . nomen ciuitatis in-declinabile .
at_that want-3pl many that t. be noun town indeclinable

“in regard to this many say that the word *Taneos* is an indeclinable place name” (Notker Ps. 77, 43, ed. Tax, p. 282, l. 2–4), preceded in the text by ‘assert’ (*chéden*)

In this paper I will begin by offering an overview of the phenomenon’s extension within the Indo-European family, mainly based on dictionaries. Subsequently, I will focus on Latin and Ancient Greek, employing diachronic corpus data to reconstruct the pathway from volition to reported thought and reported speech/text. Building upon the obtained results, I will then focus on assessing the general validity of hypothesizing a doxastic intermediate source from a diachronic cross-linguistic perspective.

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Subjectivity between analytical expressions in the propositional modality of Uzbek

Shinsuke Hidaka
(University of Tsukuba)

Keywords: Turkic language, Central Asia, Uzbek, modality, subjectivity

Uzbek has four analytical propositional modality expressions: 1. *V-(i)sh kerak* [V(erb stem)-VN necessary] ‘It is sure to V’ (Hidaka 2013: 480), 2. *V-(i)sh mumkin* [V-VN possible] ‘It is possible to V’ (possibility; Bodrogligeti 2003: 853, Kononov 1960: 401), 3. *V-sa kerak* [V-COND necessary] ‘It is probable to V’ (Contemplated actions; Bodrogligeti 2003: 876, presumption; Kononov 1960: 398), 4. **(V-PTCP) ekan** ‘It seems to V’ (evidentiality; Johanson 2018: 516). Previous studies approached these expressions semantically. This study analyzes their grammatical behaviors and clarifies their modality states.

Verstraete’s (2001) criteria distinguish between objective and subjective English modal auxiliaries concerning tense, interrogation, conditionality, and surface order. Objective modality (ex. *can* which expresses ability) can be inflected by tense, be questioned, occur in a conditional construction’s protasis, and assume an innermost position. A subjective modality (ex. the epistemic *may*) cannot and assumes the outermost position. Four analytical expressions are compared concerning tense, interrogation, conditionality, and surface ordering based on previous research and the ‘Turkic web – Uzbek’ web corpus and native Uzbek speakers. I found that *V-(i)sh kerak* ‘It is sure to V’ and *V-(i)sh mumkin* ‘It is possible to V’ exhibit objective modality. In contrast, *V-sa kerak* ‘It is probable to V’ and **(V-PTCP) ekan** ‘It seems to V’ are subjective. Examples (1)–(3) exhibit a. *V-(i)sh mumkin* and b. **(V-PTCP) ekan**. The a. *V-(i)sh mumkin* examples are permitted, while those in b. **(V-PTCP) ekan** are not.

(1) Conditionality:

- | | |
|---|--|
| a. <i>Yomg’ir yog’-ish mumkin bo’l-sa,</i>
rain rain-VN possible be-COND
“If it is possible that it rains, ...” | b. * <i>Yomg’ir yog’-ar ekan bo’l-sa,</i>
rain rain-PTCP.FUT EVID be-COND |
|---|--|

(2) Interrogation:

- | | |
|---|---|
| a. <i>Yomg’ir yog’-ish mumkin=mi?</i>
rain rain-VN possible=Q
“Is it possible that it rains?” | b. * <i>Yomg’ir yog’-ar ekan=mi?</i>
rain rain-PTCP.FUT EVID=Q |
|---|---|

(3) Tense:

- | | |
|--|---|
| a. <i>Yomg’ir yog’-ish mumkin edi.</i>
rain rain-VN possible PAST
“It was possible that it rains.” | b. * <i>Yomg’ir yog’-ar ekan edi.</i>
rain rain-PTCP.FUT EVID PAST |
|--|---|

Regarding surface ordering, *V-sa kerak* and **(V-PTCP) ekan** cannot be followed by other expressions (4), or combined. In contrast, *V-(i)sh kerak* is followed by *ekan* and *V-(i)sh mumkin* is followed by *V-sa kerak* and *ekan* as in (5) while *V-(i)sh kerak* and *V-(i)sh mumkin* cannot be combined.

- (4) **Ertaga yomg’ir yog’-sa kerak ekan.*

tomorrow rain rain-COND necessary EVID

[Intended reading: It seems that it should rain tomorrow.]

(5) *Ertaga yomg'ir yog'ish-i {mumkin/kerak} ekan.*

tomorrow rain rain-VN-3.POSS necessary/possible EVID

"It seems that {it is possible that it rains tomorrow/it should rain tomorrow}."

Using Verstraete's (2001) criteria, *V-(i)sh kerak* and *V-(i)sh mumkin* show objective and *V-sa kerak* and *(V-PTCP) ekan* show subjective modalities. Therefore, *V-(i)sh kerak* and *V-(i)sh mumkin* form one group, while *V-sa kerak* and *(V-PTCP) ekan* form another (see Table 1).

Table 1: Examination results

	<i>V-(i)sh kerak</i> 'It is sure to V'	<i>V-(i)sh mumkin</i> 'It is possible to V'	<i>V-sa kerak</i> 'It is probable to V'	<i>(V-ptcp) ekan</i> 'It seems to V'
Conditionality	+	+	-	-
Interrogation	+	+	-	-
Tense	+	+	-	-
Surface Ordering	Innermost Cannot be combined.		Outermost Cannot be combined.	

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The interaction of negation and evidentiality from a typological perspective

Héloïse Calame
(University of Helsinki)

Keywords: typology, negation, evidentiality, interaction, morphosyntax

Research on negation and evidentiality has seen a significant increase in the last decades, both from a typological perspective and for specific languages. The interaction of both domains with other grammatical categories has been investigated (e.g. Aikhenvald 2004, Miestamo 2005). However, the interaction of evidentiality with negation is heavily understudied. Apart from a few mentions (e.g. de Haan 1997) and language-specific analyses, I am not aware of comparative research on the topic.

To fill this research gap, the present study analyses how clausal negation and grammatical evidentiality interact in different languages, and draws a comparative picture of the forms this interaction can take. Semantically, there are two possibilities, illustrated in example (1) with a visual source of evidence (expressed lexically due to the characteristics of the English language) and the negator: in (1a), the proposition is negated, and in (1b), the source of evidence is negated while the proposition is affirmed.

(1) a. 'I see that it is not raining.'

b. 'I do not see that it is raining.'

Since negation is a function universally grammaticalized in natural languages (Dahl 1979: 79), but grammatical evidentiality is only found in around a fourth of the world's languages (Aikhenvald 2004: 1), the typological sample for this study contains languages that are known to have at least one grammaticalized evidential marker. De Haan's typological study of evidentiality for the World Atlas of Language Structures (2003a,b) provides a good basis for sampling: the sample for the present study contains one language per family classified by de Haan as having evidentials (70). To show maximal variety, 9 languages known to be of interest for this phenomenon are also discussed, such as Akha (Aikhenvald 2004) and Cheyenne (Murray 2016).

Results show that negation and evidentials can co-occur in most languages of the sample (35/38) for which sufficient data is available (38/70). When co-occurring, the scope of negation is on the proposition in most languages, as in (1a); only two languages allow the negation of the evidential (1b). While there is nothing unpredictable in the co-occurrence for three quarter of languages, some present asymmetry: the co-occurrence entails more changes in the clause than the mere addition of negator and evidential, as in Eastern Pomo (see example 2). Other asymmetries include, for example, the possibility to omit certain evidentials under negation that are obligatory in affirmative sentences.

(2) Eastern Pomo (McLendon 1996:532)

a. xa=mí-ť ka-Nú--le
HRSY=3SG.F.A speak-HRSY
'She spoke, they say.'

b. xa khúy--le ka-Nú -kh
HRSY NEG-HRSY speak-PUNC
'She never said a word, they say.' (lit. 'She didn't say, they say.')

All in all, this study shows that the interaction of negation and evidentiality is of interest both from semantic as well as morphosyntactic points of view, and as much for language-specific research as for typological studies. In my talk, I will give an overview of the diversity of interactions between negation and evidentiality, and their frequency in the 70-language sample. In short, it is a typology of *not knowing what happened* and *knowing what did not*.

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‘Turn out’ verbs in European languages: Are they evidentials, miratives or something else?

Patrick Dendale, Ana Stulic & Dámaso Izquierdo Alegría
(Universiteit Antwerpen, Université de Bordeaux Montaigne & Universidad de Navarra)

Keywords: *turn out* verbs, evidentiality, mirativity, discovery of information verbs, metaphoric processes

Our talk is on ‘*turn out*’ verbs in a selection of European languages: *to turn out* (English), *blijken* (Dutch), *s’avérer* (French), *resultar* (Spanish) and *ispostaviti se* (Serbian). The main focus will be on their use in impersonal constructions in past tenses, in which they all have the meaning studied here. They are illustrated by the sentences (1)-(5):

- (1) I figured that she was his wife. **It turned out** that she wasn't. (entt21)
- (2) Al snel **bleek** dat er geen camping was. (nltt20)
*‘It quickly **turned out** that there was no campground.’*
- (3) **Il s’est avéré** que cette maladie pouvait être précancéreuse. (ftt20)
*‘It **turned out** that the illness could be precancerous.’*
- (4) Pensábamos que sí y **ha resultado** que no. (TstSpan14-21)
*‘We thought so and it **turned out** not.’*
- (5) Kada smo dosli tamo na lice mesta, **ispostavilo se** da ski pass za 6 dana košta [...] 145€ (MacocuSerb) *‘When we arrived there on the spot, it turned out that the ski pass costed 145€’*

Verbs of this class have been categorized (1°) as evidentials (Tobback & Lauwers 2012 for French; Vliegen 2011, Mortelmans 2017 for Dutch; Cornillie 2007 for Spanish) and/or (2°) as miratives (Serrano-Losada 2017 for English and Spanish; Mortelmans 2017, 2022 for Dutch).

We will first challenge these categorizations with cross-linguistic data from Sketch Engine’s big corpora, which will show that these verbs:

- (1°) cannot be evidentials, as they are semantically vague for the source of information.
- (2°) although they have a mirative(-like) effect, their characterization as miratives is dependent on how mirativity and miratives are defined (Aikhenvald 2012, DeLancey 2012, Hengeveld & Olbertz 2012, Hanson 2021).

We will then show, with a semantico-lexical study, as an answer to the question “What kind of verbs, semantically, are they?”, that they should in fact be characterized as ‘discovery of information verbs’ (cf. Clark 2010:155; Pérez Béjar 2020:349), which are conceptually near to (lexical) ‘discovery verbs’ with human subjects, such as *discover*, *trouver*, *enterarse* and *saznati*. The properties of the concept underlying the more specific of these classes of verbs will be described in relation to three ‘phases’ of the discovery process: (a) a preparatory state of “not knowing, being uncertain whether or wrongly believing”, (b) a median phase of “getting the information” and (c) a resulting state of “having true, certain knowledge”.

We will show how these three ‘conceptual’ properties can be mapped onto various linguistic properties of the constructions under analysis and their accompanying contexts. For phase (a): epistemic markers (*I (wrongly) thought that..., but...; à première vue...mais...,etc.*); for phase (b): the presence of adverbs (*at final,...*) linked to the achievement status of discovery verbs (Vendler 1957) and their vagueness for the way the information was acquired; and for (c): the truth-status of the acquired information (is it presupposition ? (Karttunen 1971)).

The final section of the talk will briefly discuss the metaphoric processes that underlie the divergent ‘turn out’ lexicalizations in the languages studied and how they are linked to either one of the two ‘essential’ properties of the discovery event: to (b) (*blijken, turn out*) or (c) (*s'avérer, resultar, ispostaviti se to*).

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Emerging Evidential Constructions in Contemporary Hebrew

Danny Kalev

(David Yellin Academic College of Education)

Keywords: Evidentiality, Hebrew, Grammaticalization, Construction Grammar, Insubordination

Hebrew complement clauses are preceded by an obligatory *ʃε* 'that':

1. a *χαʃavti* *ʃεʔata vεpaʔulina* *tavoʔu*
 think.PST.1SG **CMP**-you.SG and-Paulina come.FUT.2PL
 'I thought that you and Paulina were coming'

And yet, a new construction that lacks *ʃε* is emerging recently (a **⓪** symbol indicates an expected *ʃε*):

- b *χαʃavti* **⓪***ʔata vεpaʔulina* *tavoʔu*
 think.PST.SG1 you.SGM and-Paulina 2.come.FUT.PL
 'I thought you and Paulina were coming'

Arguably, (1a) and (1b) are interchangeable, as the elision of *ʃε* is commonly attributed to phonetic attrition and casual speech. However, Colloquial Hebrew corpus data (Maschler et. al., 2021) challenge this view. The elision appears acceptable with matrix verbs designating evidentiality and epistemic modality, as shown in (1b). By contrast, *ʃε* is obligatory when preceded by matrix verbs that convey speaker-oriented modality (Bybee, Perkins, & Pagliuca, 1994, p. 179) e.g., volitive, permissive, prohibitive and stance lexemes (Kalev, 2023):

2. a *hiskamti* *ʃεjaʔarχu* *ʔoti*
 agree.PST.1SG **CMP**- FUT.3PL.edit ACC.1SG.
 'I agreed to be edited (lit. I agreed that they would edit me)'
- b **hiskamti* **⓪***jaʔarχu* *ʔoti*
3. a *hitlonanti* *ʃεhaʔotobus lo acar* *bataχana*
 complain.PST.1SG **CMP**-THE-bus NEG stop.PST.3SG at.THE-stop
 'I complained that the bus hadn't stopped at the bus stop'
- b **hitlonanti* **⓪***haʔotobus lo acar* *bataχana*

Examples (2) and (3) demonstrate that *ʃε* elision is semantically-restricted. Consequently, it cannot be attributed to phonetic attrition or free-variation. I will propose an alternative analysis to this phenomenon.

Although Hebrew is considered a non-evidential language (Aikhenvald, 2004, p. 10; Zuckermann, 2006, p. 469), I maintain that *ʃε*-less utterances are *Evidential Constructions* (ECs) similar to "Complement-Taking Predicates" in English (Thompson, 2002, p. 146).

Formally, I define ECs as simplex sentences that pair an *evidential phrase* and its proposition:

4. [*ʃamati*]_{HEARSAY} [*hiʃtagata* *kcat*]_{PROPOSITION}
 hear.PST.1SG become-mad.PST.2MSG little
 ‘you’re out of your mind [so they say]’

The evidential phrases in (Table 1) are frequently-used collocations, many of which have undergone phonetic condensation, syntactic reanalysis and semantic shift – telltale indicators of grammaticalization (Hopper, 1991, p. 21; Bybee, Perkins, & Pagliuca, 1994, p. 299; Traugott & Dasher, 2002, p. 27) e.g., *nirʔe* ‘li’ ‘it seems to me’ > *niʔeli* ‘probably’:

Table 1: Contemporary Hebrew Evidential Phrases

	Evidential phrase	Literal meaning	Evidential meaning	Example
1	<i>nireli</i>	‘It seems to me’	Inferred	<i>nireli</i> ① <i>nifʔarim babajit</i> ‘Looks like we’re staying at home’
2	<i>ʃafavti</i>	‘I thought’	Counterfactual	<i>ʃafavti</i> ① <i>ʔani hoze</i> ‘I thought I was hallucinating (=upon hearing a muffled blast)’
3	<i>raʔiti</i>	‘I saw’	Firsthand visual	<i>raiti</i> ① <i>ʔanaʃim baʔu [ve]heʔeviru kartisim</i> ‘I saw people coming [and] swiping [their] cards’
4	<i>ʃamati</i>	‘I heard’	Secondhand, Hearsay	<i>ʃamati</i> ① <i>hiʃtagata kcat</i> ‘you’re out of your mind [so they say]’
5	<i>jeʃ dibur</i>	‘There’s talk’	Secondhand, Dubitative	<i>jeʃ dibur</i> ① <i>meʃabel puna bemasok</i> ‘Rumor has it that a terrorist has been evacuated on a helicopter’

As the examples illustrate, *ʃe* elision is well-formed with all of the evidential phrases listed in (Table 1). Moreover, the *ʃe* lacking form has become predominant in Colloquial Hebrew. No fewer than 62% of the sampled *nireli* utterances are *ʃe*-less, whereas 38% thereof manifest an explicit *ʃe* (Kalev, 2023, p. 11).

In conclusion, *ʃe* elision is a robust and motivated phenomenon designating an evidential import. Its syntactic formulation as ECs iconically reflects the “demotion” of the matrix clause to a parenthetical formulaic evidential, along with the insubordination (“raising”) of the salient proposition.

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An evidential perfect in Wangerooge Frisian (Germanic, Northern Germany)

Sune Gregersen
(Kiel University)

Keywords: tense, aspect, evidentiality, functional analysis, Germanic

Perfect constructions developing evidential functions have been described for numerous languages of the world, including many languages of Eastern Europe and Central Asia (see e.g. Kehayov 2008; Plungian 2010; Kuteva et al. 2019: 318–319). In Western European languages, by contrast, evidentiality is more frequently expressed by other means, such as modal auxiliaries, ‘seem’ verbs, or dedicated particles (see e.g. Wiemer & Marín-Arrese 2022). This leads Wiemer (2010: 66) to conclude that perfects in Western European languages “hardly ever show signs of evidential extensions”.

In this paper, I suggest that the periphrastic perfect in Wangerooge Frisian could be used as an evidential strategy expressing non-firsthand knowledge. Wangerooge Frisian – which is usually classified as an East Frisian dialect – was spoken by a small island community in Northern Germany until the early 20th century. The variety is thus extinct, but it was extensively documented in the 19th century (Ehrentraut 1849, 1854; Littmann 1922; Versloot 1996). The analysis presented in this paper is based on manual excerption of examples from this corpus.

The paper first provides a brief overview of the tense system, after which I present the evidence for an evidential perfect. It is shown that while events from the speaker’s own life are typically narrated in the simple past (cf. [1]), traditional stories such as fairy tales and ghost stories (cf. [2]) are most often told in a combination of the perfect and the present.

- (1) *Un as wi in Altenå kaumen, då fernaumen wi,*
and when we in Altona come.PST.PL then realise.PST.PL we
dat ’r kriich weer
COMP EXPL war COP.PST.3SG
‘And when we came to Altona (PST), we realised there was a war (PST)’ (Littmann 1922: 20)

- (2) *den hää hii in siin fiin blau klóeder longs*
then have.PRS.3SG he in his fine blue clothes along
yar píizel líipiin. dait hää saa thríiuu
their living_room walk.SUP that have.PRS.3SG so three
jeer döör duurd.
year through last.SUP
‘Then he [a ghost] supposedly walked around outside their living room in his fine blue clothes (PF). That supposedly went on for three years (PF).’ (Ehrentraut 1854: 18)

In addition to the ‘renarrative’ use in (2), which is very frequent in the corpus, the perfect also occasionally appears to be used with an inferential evidential meaning. In (3), a character in a fairy tale

infers from visual evidence – three golden rings found in the stomach of a fish – that the owner of the rings must have drowned:

- (3) *da* *fisk* ***háb't*** *sin* *finger* *up* ***frittin*** *un*
DEF.PL fish[PL] have.PRS.PL his finger[PL] up eat.SUP and
- háb't*** *da* *golen* *ring* *mit* ***íinslickiin***
have.PRS.PL DEF.PL golden ring[PL] with swallow.SUP
'The fish must have eaten his fingers (PF) and swallowed the golden rings along with them (PF)'
(Versloot 1996: 449.29)

I end the paper with a brief comparison with Low German, the main contact language of Wangerooge Frisian. While no detailed functional analysis of the Low German tense system is available, scattered remarks (e.g. Bernhardt 1903: 18) suggest that some dialects had similar evidential uses of the periphrastic perfect. This underscores the need for evidence from spoken vernaculars – not just the standard literary languages – when making generalisations about the typology of European languages.

Abbreviations

COMP = complementizer; COP = copula; DEF = definite; EXPL = expletive; PF = perfect; PL = plural; PRS = present; PST = past; SG = singular; SUP = supine.

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GS Habituals

The genesis of Irish English habitual *do*: An analysis of the 1641 Depositions

Seamus Johnston, Zeltia Blanco-Suárez & Teresa Fanego
(Reitaku University, University of Santiago de Compostela & University of Santiago de Compostela)

Keywords: Celtic, depositions, habitual aspect, Irish English, periphrastic *do*

The marking of habitual aspect in Irish English (IrE) is one of its defining features. A habitual marker “describe[s] a situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of a whole period” (Comrie 1976: 27–28; see further Dahl 1985, and Fortuin 2023). Examples (1)–(2) below illustrate two of several verbal markers employed with habitual function in IrE; respectively unemphatic *do*+lexical verb and ‘invariant’ *be* (Kallen 1989; Filppula 1999: 130–150):

- (1) More and Browns ownded it [a place in Co. Wicklow]. Guinnesses **did own** it one time. They sold it to Lord Avonmore. (Filppula 1999: 134)
- (2) A lot of them **be** interested in football matches. (Filppula 1999: 136)

This presentation is concerned with instances of *do*+lexical verb in the 1641 Depositions, since it antedates all other IrE habitual markers, with instances being found from the early eighteenth century (Bliss 1979: 292–294; Filppula 1999: 138–139; Hickey 2007: 219–220). The 1641 Depositions are a compilation of witness testimonies recorded in the wake of a rebellion in Ireland in 1641.

The motivations for our choice of topic are, first, that there is consensus in the field that IrE habitual *do* stems from Early Modern British English affirmative declarative clauses featuring the verb *do* as an unemphatic, colourless auxiliary (so-called ‘periphrastic *do*’), a usage now obsolete. The hypothesis is that periphrastic *do* formed part of the English input to Ireland carried by speakers from the south-west, and was co-opted for habitual use (Filppula 1999: 136–144; Hickey 2007: 220–222), a development which was probably assisted by Celtic influence, that is, by the existence in Irish of special forms for habitual aspect (see Bliss 1972; Filppula, Klemola and Paulasto 2008: 188–191; Ronan 2020). Given the above mentioned connection between IrE habitual *do* and BrE periphrastic *do*, it is advantageous to have at one’s disposal detailed studies on periphrastic *do*, such as Ellegård (1953), Rissanen (1991), Wischer (2008), Warner (2012), or Budts (2022), among others. Rissanen’s quantitative analysis, based on the *Helsinki Corpus of English Texts* (1500–1710), concludes that he could not find “any aspectual tendency in the use of periphrastic *do* in EModE” (1991: 323).

A second motivation for the focus on habitual *do* has to do with the textual record of Early Modern IrE. This is very scant, but the availability since 2010 of a digital edition of the 1641 Depositions has opened new possibilities for linguistic research. For this presentation, we are employing a subset of the Depositions totalling 400,000 words and consisting of testimonies of deponents residing or based in counties Clare, Dublin, Kerry and Wicklow (mirroring the composition of Filppula’s [1999] twentieth-century corpus). Our findings reveal a considerable number (73 tokens) of habitual uses in both the present and past tenses, such as (3)–(5) below. The use of *do*+lexical verb as a habitual marker at such an early stage challenges earlier accounts and suggests that the exact functions of periphrastic *do* in the input variety, BrE, need to be investigated further, so as to illuminate the genesis of IrE habitual *do*.

- (3) This examinett having some stock of cattle and other goods [...] due to him in the Com of Roscomman where this examynett **did dwell** before his coming he there to Dublin vpon

the begining of this Rebellious Inserecton [...] (Information of George Davys; Dublin, undated; MS 830 fol. 010r)

- (4) dureing the said siedge the said Hugh mc Crutten **did vse to** take a note in writeing of as many of the besiedgers as were either hurte or killed (Deposition of John Ward; Clare, 25/4/1643; MS 829 fol. 81v)
- (5) The Rebels vizt Captain Welsh Captain Scurlogh Captain Talbott and divers other Rebellious persons and their souldiers **doe comonly resort** vnto & haue free & open harbor & entertainment there (Deposition of William Hollis; Dublin, 27/4/1643; MS 810 fol. 236r)

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A cross-linguistic survey of habitual markers

Sune Gregersen & Eva van Lier
(Kiel University & University of Amsterdam)

Keywords: habituals, aspect, imperfectivity, grammaticalization, typology

This paper presents a cross-linguistic investigation of grammatical habitual markers, i.e. morphemes and constructions expressing that a situation is (or was, or will be) typical or usual. Oft-cited examples include the English *used to*-construction, the Spanish verb *soler*, and the auxiliary *save* in Tok Pisin, as in (1):

(1) *Na dispela memba em Kristen man. Em i no*
and this member he Christian man he PR NEG

save kaikai buai pulim smok na dring bia
HAB chew betelnut pull smoke and drink beer

'This member is a Christian man. He doesn't chew betelnut, smoke or drink beer'
(Mühlhäusler et al. 2003: 225–226)

Habitual markers have been described for numerous languages of the world (see e.g. the contributions to Boneh & Jędrzejowski 2019), but have had a somewhat marginal status in the cross-linguistic literature on aspect (e.g. Comrie 1976; Dahl 1985; Bybee et al. 1994). Habituality is not covered in WALS (Dryer & Haspelmath 2013), and the only typological surveys of the category that we are aware of (Cristofaro 2004; Fortuin 2023) focus on its relation to other functional categories, namely irrealis and (im)perfectivity.

Our study focusses on two major questions: What are the formal means to express habituality in the world's languages, and what are the diachronic sources of such markers? To answer the first question, we surveyed grammatical descriptions of a variety sample of 102 languages (adapted from Audring et al. 2021). Because no diachronic information was available for most of these, a convenience sample of 75 additional languages was added in order to answer the second question. This allowed us to collect a substantial catalogue of likely diachronic sources of habitual markers, supplementing the overviews of lexical sources provided by Bybee et al. (1994) and in the *World lexicon of grammaticalization* (Kuteva et al. 2019).

The survey suggests that grammatical habitual markers are cross-linguistically common, being attested in the majority of the languages in the variety sample (57/102). Of the various formal strategies found in these languages, habitual affixes are most frequent, being attested in 34 of the 57 languages where a habitual marker was found. Habitual auxiliaries, on the other hand, appear to be quite rare (5/57). Common diachronic sources of habitual markers include lexemes meaning 'know', 'like', 'do', and existential constructions. Another common strategy is to use a nominal construction, such as the agent nominalizer *-q* described by Shimelman (2017) for Yauyos Quechua:

- (2) *awturidad-kuna-qa paka-ku-q huk law li-ku-q*
 authority-PL-TOP hide-REFL-AG one side go-REFL-AG
 ‘The officials would hide, they would go other places.’ (Shimelman 2017: 167)

A surprising finding in light of some earlier work (Dahl 1985; Carlson 2012) is that several languages in our sample have more than one habitual marker, suggesting that it may be necessary to distinguish between different subtypes of habituality (cf. also Boneh & Doron 2008 on Hebrew and Hengeveld et al. 2021 on English). At the end of our paper, we briefly discuss the theoretical and methodological consequences of this finding.

Abbreviations

AG = agentive; HAB = habitual; NEG = negation; PL = plural; PR = predicate marker; REFL = reflexive; TOP = topic.

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GS Language contact I

Non-Canonical agreement patterns of definiteness

Ruth Stern
(The Hebrew University of Jerusalem)

Keywords: agreement, definiteness, Mediaeval Hebrew, corpus linguistics, Language contact

The lecture presents the findings of a diachronic study that examines unusual agreement patterns in definite nominal expressions occurring in Hebrew texts in various stages in its history. We will show that the repeated appearance of the relevant construction does not reflect a uniform phenomenon, but stems from factors connected to changes in the sociolinguistic dimensions of the use of Hebrew over time.

Definiteness is expressed in Hebrew by prefixing the definite article *ha-* to nominal expressions, whereas indefiniteness is expressed by zero marking, (Waltke & O'Connor 1990, §13, Danon 2013). Nominal heads and the adjectival modifiers accompanying them must agree not only in gender and number, but also in definiteness. Therefore, the definite article *ha-* is prefixed both to the nominal head and the adjectival modifier (Jouön 2006, §138), e.g.:

<i>ha-'ēl</i>	<i>hag-gādōl</i>
DEF-God.MSG	DEF-great.MSG
'The great God' (Deut 10:17)	

However, in various historical strata of Hebrew there are exceptions to this rule, as indefinite nominal heads are sometimes accompanied by a definite adjectival modifier (Brog 2000, Lambert 1895), e.g.

<i>yōm</i>	<i>haš-šiššī</i>
day.MSG	DEF-sixth.MSG
'The sixth day' (Gen 1:31)	

The lecture examines the distribution and usage patterns of this non-canonical construction in the various historical strata of Hebrew, in order to determine the factors that triggered its presence in the texts. We will show that these factors changed over time, reflecting major changes in the sociolinguistic circumstances of Hebrew, first following the loss of its vernacular use in antiquity and its transformation into a written language in a state of diglossia, and later on its reemergence as a spoken national language from late 19th century onwards.

The findings are based on the examination of a vast textual corpus spanning from the 11th century to the 20th century, consisting of 19 sub-corpora (40,000 words each) that reflect language use in different genres (both religious and secular) written by Jews from different geographic locations, both in Christian countries and under Muslim rule. Special attention is dedicated to the use of Hebrew during the period of modernization in late 19th century and early 20th century.

The separate analysis of all occurrences of the construction in the various sub-corpora indicated a significant difference between the periods in which Hebrew was both spoken and written on the one hand, and the long interim period of diglossia on the other hand. The non-canonical usages found in the classical linguistic stages mainly reflect natural linguistic processes of analogy to a to another syntactic structure in Hebrew (Ben-hayyim 1987, Gai 2005, Sarfatti 1989), whereas in the period of diglossia, such usages reflected the influence of either the classical

inventory or the impact of the European contact languages, in which agreement in definiteness does not exist. In writings of Arabic-speaking Jews, by contrast, similar examples did not occur. In the modern period the exceptions to the rules of agreement gradually disappear due to standardization processes which involved, inter alia, greater systematization of the grammatical system (Reshef 2020).

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Animacy in differential P indexing in Abui: A panel study

Eva van Lier, George Saad & Katherine Walker

(University of Amsterdam, Palacky University Olomouc & University of Amsterdam)

This paper addresses ongoing change in the way object (P) arguments are indexed on verbs in Abui, focusing on the role of animacy. Abui is a minority language of Alor (Indonesia), in contact with Alor Malay, the regional lingua franca. The contact situation results in an under-documented pattern of bilingualism, recently termed Late/Delayed/Adult Vernacular Production (Saad, Arnold, and Peddie in prep., Anderbeck 2015; Peddie 2021): children are raised in Alor Malay, but acquire passive competence in Abui through overheard speech (Kratochvíl 2007; Saad 2020). They become active speakers of Abui only in late adolescence/early adulthood (aged 17+) as they enter the community of adults, who use Abui in daily life.

Abui P-indexing on verbs is a very complex system, conditioned by both lexical factors and semantic factors, such as animacy, definiteness, and affectedness (Kratochvíl 2014). When indexing P arguments, a selection must be made between six prefix paradigms, several other proclitics and applicatives, and zero-marking (Kratochvíl, Saad, and Delpada under review). Given this complexity, it is unsurprising that younger speakers with less input would reconfigure the system.

In this paper, we explore the strategies used to index (in)animate P arguments, presenting results from production and comprehension experiments. Using a cross-sectional approach, we compare younger speakers to older speakers. We combine this with a panel study, using longitudinal data from two groups (*pre*)adolescents, aged 9-16, and *young adults* aged 17-25 gathered in two waves in 2015 and 2023. The questions we address are: i) What new patterns of marking animacy are emerging? ii) Are speakers regularizing within-group variation as they age? iii) How do the newly emerging patterns relate to general typological trends?

This paper thus contributes to our understanding of language acquisition and socialization in non-WEIRD societies, and to the study of contact-induced change in differential argument marking systems.

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The influence of French on the Präteritumschwund: corpus-based, historical evidence from Dutch

Isabeau De Smet & Bridget Drinka
(KU Leuven; FWO & University of Texas)

Throughout the centuries, in several adjacent European languages, the perfect has acquired preterital meaning and has replaced the original preterital forms. This process has been called the Präteritumschwund (Spitzer 1929, Fischer 2018). According to Drinka (2003, 2004, 2017), the starting point of this innovation lies in 12th century Parisian French, and spread from there to other parts of France, to Southern German, Northern Italian, and other adjacent areas. So far, Dutch has not been definitively identified as having undergone this Präteritumschwund, although the region where it is spoken lies adjacent to France, and Dutch has known intensive contact with French (Van der Sijs 2005: 162-226). Several studies do suggest that Dutch has undergone the Präteritumschwund as well and even that French might have played a role in this development. Dammel et al. (2010) compare ratios of perfects and preterites in German, Dutch, English, and Swedish and find that perfects outnumber preterites in spoken Dutch with a ratio of 54% (compared to 79% in German, but 43% in Swedish and 32% in English). Coussé (2013) shows that throughout the centuries, the *have*-perfect has indeed grammaticalized and that its use has, in fact, expanded. Finally, De Smet & Rosseel (2023) show, as a side-effect of their study, that there is a significant difference in the probability of preterites in Southern vs. Northern Dutch, with Southern Dutch showing fewer preterites—a distribution which might suggest a role for French.

In this paper, we try to determine whether the Präteritumschwund has indeed taken place in Dutch and whether language contact with French has played a role in this evolution. We use a corpus of 13th-18th century administrative and juridical texts from the Hollandic, Brabantic and Flemish region. From these texts, all preterites and perfects were selected and their distributions plotted throughout the centuries and region. What our results show is that the number of perfects have indeed increased in Dutch. Example 1 can illustrate this: where in 1270 a preterite is used, in 1377 a perfect is used, while the context stays almost completely the same.

- (1a) *wi [...] doen te verstante [...] dat **quamen** vor ons Johan vanden houe magrieta zijn wijf [...]* (Bruges, 1270)
We announce that Johan vanden houe and Margrieta his wife came before us
- (1b) *Wi [...] orconden dat voer ons **comen syn heer** [...]* (Breda, 1377)
We announce that his lord [...] came (lit. has come) before us

To measure the influence of French, we counted the number of French loans in each text. A mixed effects regression model shows that numbers of perfects increase as numbers of French loans rise. Furthermore, results also show that verbs with a French origin are more likely to appear in the perfect than verbs with a Germanic origin. This adds to the evidence that the Präteritumschwund has indeed spread through language contact with French.

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On the development of a contact variety: Spanish in Mallorca in the last 60 years

Andrés Enrique Arias
(Universitat de les Illes Balears)

This paper aims to analyze the evolution of Spanish in contact with Catalan in Mallorca in the context of the profound social transformations that have taken place in the Balearic Islands over the last six decades. Within this period Mallorca has changed from an agrarian society made up of Catalan speakers to a tourist economy in which almost half of the population comes from areas where Catalan is unknown. Against this backdrop, I examine the evolution of 33 linguistic traits of Mallorcan Spanish that were described in the early 1960s by Borja Moll (1961) and Badia Margarit (1964) considering, whenever there is available data, their past and current distribution according to sociolinguistic groups of gender, age and education level, as well as language dominance.

The information that can be obtained from previous studies and recently created corpora of sociolinguistic interviews allows us to reach some conclusions about the development of Spanish in Mallorca in the last sixty years. The Spanish of Catalan speakers has decisively approached the monolingual standard: some traits that were widespread in the mid-20th century are now relegated to rural elderly speakers with primary education. This evolution would be due to the persistent negative assessment of some elements of Spanish influenced by Catalan and the consequent tendency to avoid them. However, there are other contact features that, possibly because they do not produce negative attitudes, persist in the Spanish of Catalan speakers, even among young people with university studies. At the same time, Spanish-dominant speakers, including monolinguals, have incorporated a good number of contact features that have become generalized among all ethnolinguistic groups, ages and educational levels. In this way, in the Balearic Islands there has been a parallel process to that of other bilingual areas of Spain (Moreno Fernández 2020: 35-37), in which a wide repertoire of interference features of the contact language has become part of the local Spanish variety and is transmitted generationally.

This evolution has far-reaching theoretical implications, since it goes against some of the common trends proposed for language contact processes: 1) contrary to expectations, speakers of the subordinate language in a diglossic situation (Catalan) have ended up influencing the speakers of the prestigious language (Spanish); 2) this influence has not occurred in the situation that is considered more favorable, that of societal bilingualism, since during the first decades of settlement of the newcomers to Mallorca, knowledge of Catalan among Spanish speakers was very low; 3) there has been no direct transfer from the donor language—Catalan—to the recipient language—Spanish—but rather indirectly from a stigmatized variety, such as the interlanguage of Catalan speakers, to a more prestigious variety, that of monolingual Spanish speakers.

In sum, the study of microdiachrony presented here will serve to illuminate questions of theoretical interest related to how contact varieties are created and develop in the context of abrupt sociodemographic changes, such as those that have occurred in the Balearic Islands over the last sixty years.

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GS Phonetics and Phonology

Phonetic characteristics of prosodic augmentation in Shiwiar

Martin Kohlberger
(University of Saskatchewan)

Keywords: evaluation, augmentation, prosody, phonetics, Shiwiar

Most of the research on the expression of grammatical evaluation (i.e. the expression of diminution or augmentation) has centred on morphology (Scalise 1984; Bauer 1997; Grandi and Körtvélyessy 2015; *inter alia*). Although the use of prosody to express evaluation has also been noted in many languages, it is often seen as an ad-hoc strategy that exists in addition to lexical or morphosyntactic means (e.g. Gussenhoven 1999 for English). However, in some languages, the expression of evaluation seems to be primarily expressed prosodically. This phenomenon, labelled “prosodic augmentation” by Lovick (2023), is yet to be investigated systematically. This talk will explore the phonetic characteristics of prosodic augmentation in Shiwiar, a Chicham language of northwestern Amazonia.

Shiwiar is spoken by 1,200 people in the lowlands of eastern Ecuador and northern Peru. Although Shiwiar exhibits a rich array of morphological strategies for expressing evaluation (including diminutive/augmentative suffixes for nouns and attenuative/intensive suffixes for verbs), the expression of evaluation in adverbs and quantifiers is almost exclusively achieved by means of a prosodic strategy. The data examined here are drawn from a 30-hour audiovisual corpus of natural speech, collected between 2010 and 2020.

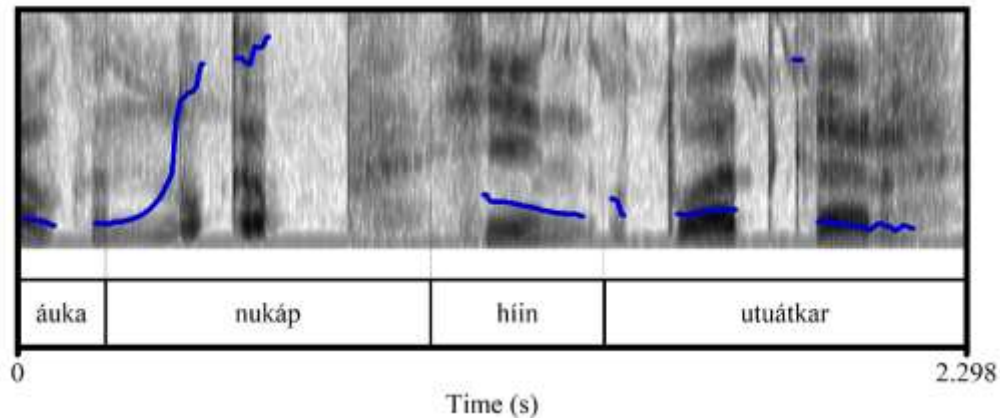
Shiwiar adverbs and quantifiers can be intensified in two ways: either by reduplication or by prosodic augmentation. The latter strategy is by far the most common in the corpus. Example (1) shows a case of a stylistically neutral use of the quantifier *nukáp* ‘many/much’, compared to a prosodically augmented use of the same quantifier in example (2).

(1) [utʃíkʷa **nukáp** wahármiaji]
utʃí=kʷa **nukáp** wahá-r-mia-ji
child=TOP **much** stand-APPL-DIST.PST-3.S+DECL
‘**Many** children were standing there.’

(2) [áuka n:ũkǎp:^h híin utuátkar]
áu=ka **nukáp** híi=n utuá-t-ka-r
DIST=TOP **much** fire=OBJ put.inside-APPL-PFV-3PL.SS
‘They put a **very large amount** of fire there.’

As seen in the blue pitch track on the spectrogram below, the primary phonetic characteristic of prosodic augmentation in Shiwiar is a sudden and extreme high pitch excursion on the relevant lexical item. However, there are other accompanying phonetic effects as well: the vowels in the word are produced

with considerable tenseness, causing centralisation of the vowel quality, and consonants are produced with increased duration. Furthermore, what would normally be an unreleased word-final stop is produced as a geminated aspirated stop in the prosodically augmented version.



This talk will show that there is some variation in the production of prosodic augmentation by different speakers in different contexts. For example, some speakers make use of a large pitch excursion more readily whereas others use segmental cues in a more pronounced way. Furthermore, when prosodic augmentation occurs on a focused constituent, speakers are more likely to make use of a larger array of prosodic markers. However, despite this variation, the use of increased pitch and segmental duration is found ubiquitously when speakers express augmentation. Crucially, it is evident that Shiwiar speakers systematically and reliably express augmentation on adverbs and quantifiers by prosodic means alone, despite the fact that there is a competing lexical/morphological strategy available in the language.

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Dialectal Backing and the Fourth Palatalization of Velars in Southwest Ukrainian: The Case of the Kryvorivnja Dialect

Oksana Lebedivna
(University of Edinburgh)

Dialectal backing refers to the correspondence of $t^j, d^j > k^j, g^j$ in Slavic dialects (where the apostrophe-diacritic indicates palatalization), that is, a change in which t', d' became pronounced farther to the back of the vocal tract (Sławski 1962; Shevelov 1979; cf. Stieber 1956, and Kuraszkiwicz 1963). In Southwest Ukrainian t^j, d^j has been replaced by segments k^j, g^j , respectively. In Hutsul of Southwest Ukrainian (SWU), these reflexes regularly occur before i, e (< $*i, *i_e, *e, *u, a$) and l^j, m^j, n^j (cf. Shevelov 1979: 689; see Lebedivna 2023). However, the origins and nature of this innovation remain unclear. The Kryvorivnja dialect (Kr), one of the southeastern Hutsul dialects, often renders *dialectal backing* as $[k^j \sim t^j]_1$ and $[d^j \sim g^j]$ sounds. These fluctuations encompass frication and point to the primary palatalization of a stop as opposed to the overall secondary palatalization before unrounded vowels in Kr; cf. the data in (1) in comparison with Standard Ukrainian (henceforth StU).

- (1) [$'g^j e^j g^j \sim d^j i^j \epsilon^j$] 'father' nom.m.sg StU 'tato
[pit sk $^j \sim t^j i^j$ nou] 'by the wall' inst.f.sg StU p'id st'i'noju

In Kr, segments $[k^j \sim t^j]_1$ of the earlier in time fourth palatalization of velars (4pal) and $[k^j \sim t^j]_2$ largely coincide. The 4pal is a historical change that turned Common Slavic (CS) $*g^j, *k^j, *x^j$ into g^j, k^j, x^j in the North Slavic languages, particularly in Ukrainian involving later generalization in velar palatalization to the positions before e (< CS $*e$) (Flier 2007, 2018, and Lebedivna 2023). However, unlike the first regressive palatalization of velars (Shevelov 1964: 261), it did not produce palatal fricatives due to other phonological changes in the system. In Kr, it is largely represented by $[k^j \sim t^j]_1$, with frication, e.g., $d^j i w [t^j \epsilon]$ 'girl' nom.f.pl, rather than $d^j i w [k^j \epsilon]$.

I apply experimental, structural, and comparative methods. In particular, I rely on the understanding of the peak frequency for fricatives (Hughes and Halle 1956; Maniwa and Jongman 2009) and use the *Praat* script by Christian DiCanio, Haskins Laboratories, and SUNY Buffalo (2013) to calculate the first four spectral moments from spectra. An examination of a total of 820 tokens from 13 speakers shows that both the Kryvorivnja $[k^j \sim t^j]_1$ and $[k^j \sim t^j]_2$ demonstrate spectral mean that can be relatively high, e.g., 537–6471 Hz, i.e., higher than spectral mean for /j/ (see Hughes and Halle 1956: 308).

With this respect, I hypothesize that the fluctuations of $[k^j \sim t^j]$ and $[g^j \sim d^j]$ served as a requirement for the first velar palatalization in CS and changes of clusters $*k^j, *t^j$ into t^j and $*g^j, *d^j$ into (d^j) , z^j , at least in CS area Southwest Ukrainian became a continuation of.

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The Power of Linguistic Similarity for Unlocking Cooperation: Evidence from Syntax and Pitch Experiments

Theresa Matzinger & Irene Böhm
(University of Vienna & University of Vienna)

Keywords: linguistic alignment, syntax, pitch, cooperation, experiment

It is important to know who is a good cooperation partner, and current research highlights how language can be a key signal of cooperativeness (Henrich and Henrich 2007; Matzinger et al. 2023). In particular, low-level linguistic mechanisms such as subconsciously matching others' language have been proposed to be particularly good signals to assess others' cooperative potential (Wacewicz et al. 2017, Pickering and Garrod 2004). However, a crucial question is *why* these mechanisms are used to select others as cooperation partners. Two possible explanations have been proposed: First, low-level linguistic similarity (i.e., continuous "*alignedness*" from the start of a conversation) can indicate group membership (Dunbar 1996, Axelrod et al. 2004), and it is known that in-group cooperation is more successful (e.g., Balliet et al. 2014). Alternatively, adapting to others' linguistic choices (i.e., progressive "*alignment*" throughout a conversation) can indicate others' willingness to cooperate, since it can signal an initial cognitive investment in the cooperation (Kulesza et al. 2014, Chartrand & Bargh 1999).

To explore how people cooperate with linguistically similar conversation partners, we conducted an experiment (cf. Bock 1986) on the effect of syntactic similarity on people's cooperation partner choice (Matzinger et al. 2023): 100 English-speaking participants communicated with conversation partners, who were in fact bots, that either did or did not match the participants' syntactic choices. Based on this, the participants then had to decide with whom to cooperate in a subsequent cooperative task. Crucially, half of the participants could freely use their naturally preferred constructions (e.g., "X lends Y to Z"), while the other half were assigned a construction that was not their natural preference (e.g., "X lends Z Y").

In a logistic regression model, we found that when participants could communicate in their own preferred structures, they predominantly chose linguistically similar conversation partners as cooperation partners (77.0%, 95%-confidence interval [69.0;85.0]). However, when participants were restricted in their language use, they preferred those partners that matched their actual linguistic preference (59.3%, 95%-confidence interval [50.2;68.5]), instead of those that were similar to their overt linguistic use. We take this to mean that the sheer act of adapting to someone's linguistic production is not as crucial for choosing cooperation partners, even if it involves an initial investment. Rather, the decisive factor is sharing someone's linguistic preferences and thereby indicating social group membership.

To further disentangle the influence of *alignedness* vs. *alignment* on perceived cooperativeness, we will supplement our findings on syntactic similarity with first results from a follow-up experiment on pitch similarity. Participants will rate conversation partners speaking with a pitch that is a) aligned from the start of the conversation, b) aligning throughout the conversation, and c) dissimilar throughout the conversation. In line with the results on syntactic alignment, we predict that interlocutors in group a) will be considered as most cooperative, followed by group b), while group c) will be assessed as least cooperative. Ultimately, understanding the relationship between language

and cooperation in social groups will help us shed light on the evolution and stabilization of both of these particularly prominent human traits.

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Geminate “dissimilation” as fortition

Hans Henrich Hock
(University of Illinois Urbana-Champaign)

In a generally ignored publication, Schwyzer (1934) presents a large number of examples in which one part of a geminate undergoes differentiation; cf. e.g. (1). Schwyzer attributes the change to “Übersteigerung”, vaguely defined as an exaggerated pronunciation that overshoots its goal. Hock (2021: 136) instead interprets changes like (1) as examples of regular dissimilation. Although some of Schwyzer’s data are problematic (involving not only geminates but also singletons), this paper argues for a fortition account that captures the spirit of Schwyzer’s proposal.

(1) Icelandic *all* > *aʎl* ‘all’ (from Hock 2021)

As noted by Hock (2021: 155-156) geminates may undergo a fortition process as in (2) that goes counter to the lenition hierarchy; as (2b) shows, this even includes devoicing of voiced geminates. (See also Kirchner 2000:§1.2.6.) Hock argues that such developments can be viewed as an association of the strength of geminates with other manifestations of “strength”, i.e., essentially as an abduction, leading to fortition. An alternative account, adopted here, attributes fortition to an increase of the relative tenseness of geminates in response to a similar abduction.

(2) a. Italian *Iguvium* > **Guvvio* > *Gubbio* (place name; from Hock 2021)
b. Catalan dial. *poble* > *pobble* > *popple* ‘village’ (from Hock 2021)

I propose that developments like (1) can likewise be accounted in terms of fortition, under the assumption that in these cases, increased tensing or fortition applies not to the entire geminate but just to one part of the geminate (in the case of (1), to the first part).

Indirect support for this proposal is found in the dual behaviour of long, tense vowels as discussed by Labov (1994): While long, tense vowels commonly rise on the periphery of the vowel system (116, 176), an alternative development consists in diphthongisation (248-252). Labov convincingly argues that this difference in behaviour can be explained under the assumption that in the first case, vowel raising affects both moras of the long, tense vowel, but in the second case it affects only one of the two moras, resulting in diphthongisation.

I conclude that, though phonetic details differ, both tense consonantal geminates and tense long vowels—i.e. vocalic geminates—may undergo increased tensing or fortition that affects either the entire geminate or just one of its constituent parts.

In the final part of the presentation, I address some problematic cases of alleged geminate dissimilation (including Indo-European *tt* > *tst*) as well as implications of my proposal for the hypothesis of “geminate integrity” or “inalterability” (e.g. Kenstowicz & Pyle 1973 and especially Kirchner 2000).

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The borrowability of phonological segments: A feature-based approach

Dmitry Nikolaev, Eitan Grossman, & Steven Moran
(University of Manchester, Hebrew University of Jerusalem & University of Miami)

Keywords: segment borrowing, contact linguistics, phonological typology, phonological features, phonological databases

One of the possible results of lexical borrowing is the introduction of new phonological segments into a language. In Finnish, for example, /f/ is found only in phonologically unadapted loanwords such as *fleece* or *fliisi* 'fleece (coat)'. Over 1600 borrowed phonological segments, or 'xenophones', from more than 500 languages are documented in *SEGBO: A database of borrowed sounds in the world's languages* (Grossman et al. 2020).

With the notable exception of Eisen (2019), previous approaches to the typology of phonological segment borrowing have generally adopted a whole-segment approach (e.g., Maddieson 1986, Stolz & Levkovich 2021). In this study, we follow Eisen's (2019) approach and investigate the borrowability of phonological segments from the perspective of their phonological **features**. However, whereas Eisen (2019) tested if the presence or absence of a particular feature in the borrowing inventory makes the borrowing of new segments with a particular feature more likely, we ask what place and manner (and place-manner combinations) facilitate the borrowing of segments containing them into any language.

More precisely, we collect the borrowing and non-borrowing-given-exposure events and regress the outcome on the selected features of the (potentially) borrowed segment. We find that (i) the basic probability of borrowing is low – on average, given exposure to a new segment, languages on average do not incorporate it into their phonological inventory; and (ii) some features do show a significant effect, either facilitating or inhibiting the borrowing of segments that bear the feature. Figure 1 indicates the values for our model with individual features (relative to the voiceless alveolar stop, which we treat as a baseline; 'Voice' indicates no voice, i.e. the glottal stop). The features at the top are more borrowable, and the lower features are less borrowable. Figure 2 is a heat map that shows combinations of places with manners (again, relative to the alveolar plosive, which is a low baseline).

Our approach complements Eisen's (2019) findings regarding the role of features in the process of segment borrowing and sets up a replicable approach for studying the typology of phonological-feature borrowing.

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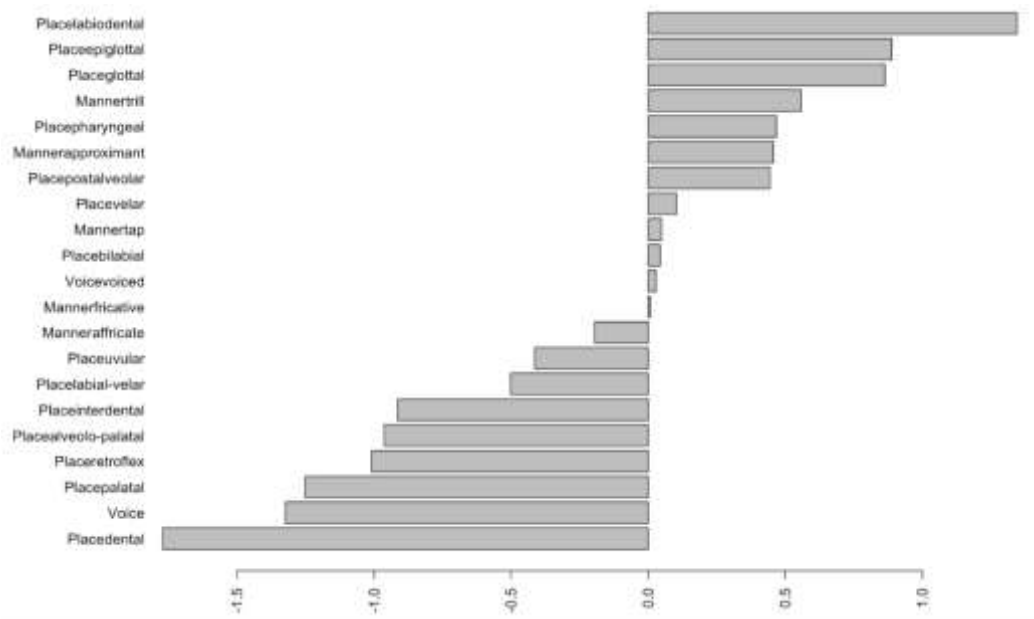


Figure 1: Borrowability of individual features

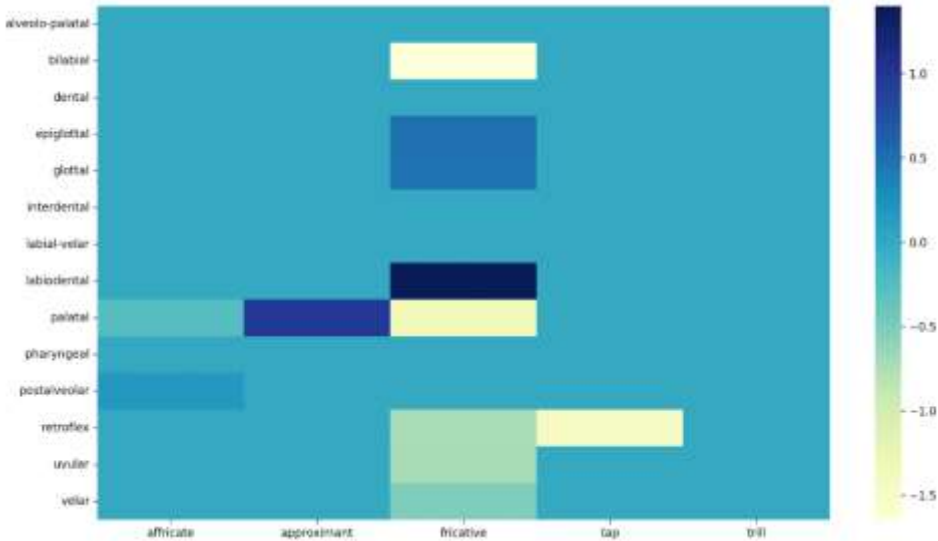


Figure 2: Borrowability of place-manner combinations

A phonetic typology of five languages: A pilot study for a phonological typology of *consonantal* and *vocalic* languages

Sonja Dahlgren
(Free University of Bozen-Bolzano)

Keywords: Coarticulation, language-specificity, language typology, phonological contrast, stress typology

In this paper, I present results of a phonetic typology conducted on ultrasound tongue imaging. The project is part of a phonological typology aiming to categorise languages based on their coarticulation directions i.e. whether coarticulation mainly occurs from consonant to vowel or from vowel to consonant. I also study whether coarticulation directions are connected to specific vowel reduction patterns and whether these, in turn, are connected to stress type differences (see e.g. Auer 2001; 1391-1393; Nübling and Schrambke 2004: 284-285). The data for the study comes from on-going collaborative studies on Finnish, (American) English, Italian, Arabic and Gaelic, with a minimum of six speakers per language.

Previous speech studies offer examples of language-specific preferences for the direction of coarticulation (Öhman (1966) English and Swedish vs. Russian; Manuel (1999) language-specific coarticulatory patterns resulting from differing needs of phonological contrasts; Traunmüller (1999) consonant-to-vowel coarticulation in NW Caucasian and Northern Chinese languages; Hardcastle and Hewletts (1999) vowel-to-consonant coarticulation in English; Scobbie and Sfakianaki (2013) vowel-to-consonant coarticulation for Greek). The current study adds to the evidence of language-specific coarticulatory patterns.

I hypothesise that coarticulatory preferences are connected to the ratio between vowels and consonants in the phoneme inventory (cf. Maddieson 2013), creating differing needs of phonological contrast and leading to language-specific word formational/inflectional patterns. For example, Finnish with its eight vowels and 11-12 native consonants is *vocalic* and Arabic with its three to five vowels but up to 28 consonants is *consonantal*. Reducing Finnish or Greek vowel qualities would lose e.g. case distinctions (Finnish *talolla* 'at the house' vs. *talolle* 'to the house'), so motivation behind a specific strategy seems to be largely functional.

The languages of the study span the continuum of stress- vs. syllable/mora-timing and differ in having/hot having vowel reduction. According to our findings, American English has similar vowel-to-consonant coarticulation to Finnish and Greek. This means that neither the stress system of a language, nor its tendency for vowel reduction, can necessarily predict its coarticulatory bias. The tendencies are not related to language families, either, because out of all the languages in this pilot study three are Indo-European with different coarticulatory patterns; furthermore all are Eurasian, but exhibit different tendencies for the phonetic phenomena. One common feature exists between Finnish and Greek: both have different stress type classifications, respectively (Finnish O'Dell and Nieminen 1998, O'Dell et al. 2007; Greek e.g. Grabe and Low 2002: 515-546), indicating that the languages possibly have no fixed stress types. Both have strong vowel-to-consonant coarticulation, and, in addition, no phonemic vowel reduction, possibly related to the high(ish) degree of noun inflection in both languages; this would lead to a need to distinguish between word-final unstressed vowel qualities

(see Renwick and Ladd 2016). I show examples of each language's ultrasound tongue imaging data, and discuss how that data reveals coarticulatory preferences and vowel reduction strategies.

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GS Causation

Decline of lability in Iranian languages: A diachronic typological perspective

Shadi Davari, Leonid Kulikov & Navid Naderi
(Ghent University, Tehran University of Medical Sciences & Independent researcher)

Keywords: Iranian, transitivity, labile verbs, Persian, causative

The paper concentrates on the basic tendencies in the history of labile verbs in Iranian languages, from the Old Iranian period (Avestan) onwards. The term ‘labile’ refers to verbs which can show valency alternation (for instance, can be employed both intransitively and transitively) with no formal change in the verb, as in the case of English *The door opened ~ John opened the door* or Vedic Sanskrit *rudrā rtāsya sādaneṣu vāvṛdhuḥ* ‘Rudras **have grown** [intransitive] in the residences of the truth’ ~ *īndram ukthāni vāvṛdhuḥ* ‘The hymns **have increased** [transitive] Indra’.

While many languages of some Western branches of the Indo-European family (in particular, most Germanic languages: German, Dutch and, especially, English; many Romance languages; Greek) attest the growth of the labile type, in the Indo-Iranian branch we mostly observe the decline of lability. Thus, Old Indo-Aryan (Vedic Sanskrit) and Old Iranian still had labile verbs in the earliest periods of their history (see Kulikov 1999, 2014 on the main developments in Old Indo-Aryan), while in later periods the number of labile verbs and verbal forms was dramatically decreasing.

Thus, the Avestan verb *irišiiēiti* is attested both in transitive usages: ‘harm, make hurt’ – e.g., in V 15.12 (*irišiiēiti*), 7.38; and in intransitive constructions: ‘be hurt’ (V 13.37 *irišiiāṭ*, V 15.48 *irišiiṇ* ‘they will not be hurt’); see Bartholomae 1904: 1485f.; Lühr 1994: 89. It is interesting to note that Iranian shows here a higher degree of lability than the closely related Old Indo-Aryan, where the Vedic cognate *riṣya-ti* ‘be hurt, injured’ is only used intransitively, except for one transitive occurrence (*riṣyet* ‘may not hurt’) Rgveda 8.48.10, perhaps due to the Indo-Aryan-Iranian bilingualism of the poets of the book 8, as assumed in Kulikov 2014: 1155-1156.

The documented history of Indo-Iranian languages attests the decline of lability, and this process can still be observed until the most recent periods. Thus, in early New Persian, i.e. before 15-16th cent. CE, we find 40 labile verbs, e.g. *suxtān* ‘burn’, as in (1):

(1) *Sine az âtaš-e del dar qam-e jânâne be-suxt âtaš-i bud dar in xâne ke kâšâne be-suxt*

‘My bosom **burnt** from the fire of grief for my beloved one which burns in my heart; there was such a fire in this room that **burnt** the whole house everywhere’.

Of these labile verbs, only eleven still attest labile syntax in the present day Persian (e.g. *pâšidan* ‘scatter / be spread’; *rixtan* ‘pour / spill’), while the other are used only transitively (19 verbs), or only intransitively (10 verbs, e.g. *suxtān*, opposed to the morphological causative *suz-ân* ‘make burn’).

Although mechanisms of this ‘delabilization’ may differ for different classes of labile forms, they all share a remarkable tendency to limit the syntax of the corresponding forms either to intransitive or to transitive usages only and, most commonly, to expand the use of morphological causatives. This paper will concentrate on the most important mechanisms of this change, elucidating the basic tendencies which are relevant for the main classes of labile verbs and forms.

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On the road or there already? Changing event construal and the expression of progressive meaning in the history of English

Juliette Kayenbergh & Hendrik De Smet
(KU Leuven; FWO & KU Leuven)

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It has been argued that since around 1500 English underwent a major change from a bounded to an unbounded typological profile, increasingly presenting events as ongoing and overlapping with other events (Carrol et al. 2004, Los 2012, and Fanego 2024). The shift went hand in hand with the rise and grammaticalization of *BE Ving* as a marker of progressive aspect (e.g. *a car is approaching*) (see e.g. Strang 1982, Smitterberg 2005, Kranich 2010, and Petr  2010, 2015). However, it is not well-understood exactly which structures were superseded by *BE Ving*. Did *BE Ving* directly replace bounded event construals, or did it replace alternative strategies already available to construe events as unbounded? In other words, was the rise of *BE Ving* the main driver of the shift of English to an unbounded profile, or was the shift already underway and a driver of the rise of *BE Ving*?

To answer these questions, this study draws on data collected from two historical parallel English translation corpora, consisting of 8 successive translations of Cervantes's *Don Quixote* (DQC) and 5 historical Bible translations (BC) respectively, which jointly cover the period from Old to Present-day English. As illustrated in (1), these data give insight into the event construal strategies employed prior to and during the rise of *BE Ving*, thereby offering an onomasiological perspective on the expression of progressive and related aspectual meanings in the history of English.

- (1) a. *as hee **travelled**, it by chance began to rayne* (1615-20, DQC)
b. *it chanced to rain while he **was on the road*** (1755, DQC)
c. *fate ordained that as **he was riding along** it started to rain* (1999, DQC)

Each translation has been searched for instances of *BE Ving* (n=300 in DQC, n=200 in BC), to then identify any equivalents occurring in any of the parallel translations.

Preliminary results from the DQC show that translation equivalents to *BE Ving* include a variety of strategies, which can be typified along two dimensions. Semantically, they express (i) progressive meaning, (ii) merely stativizing meaning, (iii) they involve some form of event boundary suppression, or (iv) they realize bounded event construal. Formally, they may represent (i) grammaticalized strategies, (ii) lexical strategies with limited productivity or (iii) purely pragmatic strategies that involve no explicit marker. For example, the *BE Ving* pattern in (1c) above corresponds to a simple form in (1a) and a lexical periphrasis in (1b). The former qualifies as a pragmatic progressive strategy, the latter as a lexical stativizing strategy. Further, current results from the DQC indicate that a mild surge in alternative strategies for unbounded construal occurred immediately before the rise of *BE Ving*. It thus seems that the shift of English from bounded to unbounded status triggered increasing reliance on more and more explicit and grammatical means to convey progressive meaning, and that the rise of *BE Ving* stemmed from the shift rather than vice versa.

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