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Contents

Invited speakers

Presentations

(in alphabetical order according to the last name of the first author)

Invited speakers

Language learning beginnings

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Abstract: Most people come to be language learning beginners at least twice in their lifetime: once rather early when they acquire their native language, and then again, at a somewhat later age when they start to learn a second language. While the development of the first and second language seem to be dramatically different processes, one can as well identify similarities between them. In this talk, I will focus on the initial stages of first and second language acquisition and present a series of experiments with infants and adults that targeted the early stages of native and non-native language development. Based on data from speakers and listeners with various language backgrounds and in various learning scenarios, I will argue that second-language adult learners have access to at least some of the learning mechanisms that were active during their first-language development in infancy. The findings will be discussed in light of influential models of language development.

P, alternatively — On adpositions, their distribution, and their license for silence

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Abstract: Building in part on previous work (some of it done in collaboration with Éva Dékány) and in part on new material, this paper presents an integral perspective on the circumstances determining the distribution of adpositions in syntax and phonology, with particular emphasis on (a) the status of individual tokens of adpositions as heads of lexical PPs or of functional projections, and (b) the conditions under which the head of a syntactically projected PP can remain silent. On the agenda for discussion are (i) argument-structure alternations in which one member features an overt P and the other does not (the conative alternation, the dative/applicative alternation), (ii) prepositions as copular mediators of predication relationships in syntax, and (iii) the link between P and case, and the principled distribution of autonomous and alternative realization of P (in the sense of Emonds' work).

On the historical development of asymmetries: The case of directional demonstratives in Germanic

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Abstract: The structuring and encoding of motion events through language, the shape of the linguistic inventories found in individual languages, as well as the symmetries and asymmetries manifested by such systems have received a great deal of attention during the last four decades. The vast majority of the relevant studies adopted a purely synchronic perspective and diachronic studies of the relevant phenomena, such as Luraghi, Nikitina & Zanchi (2017), are rare exceptions. The aim of this paper is to make a contribution to this discussion by analyzing in detail one type of directional expression in one language family, viz. directional demonstratives in Germanic languages, the structure of the relevant systems at different stages of individual languages, the reduction and loss of oppositions and the resultant creation of striking asymmetries. The results of the descriptive part will be examined and evaluated from a comparative and typological perspective.

Presentations

The pragmatics of shifted reference

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Introduction. Some languages can 'shift' indexicals, such as *I* and *you*, and use them to refer to participants of the speech event being reported (Schlenker 2003, Deal 2020). Among the various constraints that indexical shift seems to be subject to is the following: in a subset of those languages, null pronominal elements are more prone to shift than overt ones. This is illustrated in (1) for Mishar Tatar and in (2) for Turkish, respectively:

(1) *Alsu* ***pro / min*** *kaja kit-te-m diep at'-tɤ*
Alsu ***pro* / 1SG.NOM** where go.out-PST-1SG COMP say-PST.3SG

'Which place did Alsu$_i$ say $\mathbf{I}_{Spk,i}$ / $\mathbf{I}_{Spk,*i}$ went?' [Podobryaev 2014: (202)-(203)]

(2) *Seda pro / ben sınıf-ta kal-dı-m san-ıyor*
Seda.NOM ***pro* / 1SG.NOM** class.LOC flunk-1SG-PST believe.PRS

'Seda$_i$ believes that $\mathrm{I}_{Spk,i}$ / $\mathrm{I}_{Spk,*i}$ flunked' [Şener and Şener 2011: (11)/(15)]

Analogous data can be observed in Amharic (Schlenker 2003, Anand 2006), Kazan Tatar (personal fieldwork), Mutki Zazaki (Akkuş 2019) and Tsez (Polinsky 2015). Interestingly, those languages also exhibit violations of the famous *shift together* constraint (Anand and Nevins 2004), whereby two indexical pronouns within the same syntactic domain must shift; (3) involves two first person indexicals, shifted and unshifted, respectively, while (4) licenses a reading where the silent 1st person is shifted and 2nd is not.

(3) *Alsu* ***pro*** *ber kajčan da miŋga bag-m-a-s-mɤn diep bel-ä*
Alsu ***pro*** one when nPCL 1SG.DAT look.at-NEG-ST-POT-1SG COMP know.ST-IMPF

'Alsu$_i$ knows that $\mathbf{I}_i$ would never look at $\mathbf{me}_{Spk}$'
[Mishar Tatar, Podobryaev 2014: (210)]

(4) *Tunç Ayşe'ye* ***pro sen-i*** *nere-ye götür-eceğ-im de-miş?*
Tunç Ayşe-DAT ***pro*** **2SG-ACC** take-FUT-1SG say-DUB-3SG

'Where did Tunç$_i$ say to Ayşe$_j$ that $\mathbf{he}_i$ would take $\mathbf{you}_{j,Add}$.'
[Turkish, Özyıldız 2012: (23)]

Another constraint concerns the shifting asymmetry of second vs first person reference: in some IS-languages, such as Slave, first person shifting is licensed whereas second is not.

The most prominent theory of indexical shift (IS), the operator-based theory of Anand and Nevins 2004, Anand 2006 and championed by Deal 2020, has it that indexicals in those languages can shift due to the presence of a 'monster operator' that rewrites the Kaplanian context coordinates of indexicals with those of the index, provided by the attitude verb in

the matrix sentence. Under this view, IS is essentially a syntactic phenomenon: presence or absence of the monster in the functional sequence of the embedded sentence will enforce or not shifted readings of indexicals within its scope. However, operator-based accounts (OBA) cannot readily predict the data laid out in (1)-(4): even finer-grained version of the OBA, which posit different kinds of monster operators relativized to the contextual parameter/indexical type they can shift (as in **Dea20a**) cannot predict the asymmetry of *pro* vs 1st person forms in (1)-(2), since both forms are supposed to obtain their reference via the same contextual parameter and therefore, predicted to share the same shifty behavior across languages.

Indexical discourse referents and salience. To solve these problems, we propose a radically different theory, in which indexical reference is mediated entirely by the discourse context, and by the anaphoric potentials of shifted pronouns. Since person features are intended as presuppositions on pronouns (Cooper 1983, Heim 2008), they merely help circle out a possible referent compatible with their semantic content. Pronoun choice is further regulated by a competition mechanism that adjudicates between pronominal forms making use of structural alternatives (Katzir 2007).

Thus, the use of a pronominal form in a given language L is regulated by its lexical meaning but also by its competing alternatives within L. This alternative-based view, coupled with the appropriate semantics, allow us to derive the first dataset (1)-(4): since $pro \leq$ 1st and $[\![pro]\!] \subseteq [\![1st]\!]$, in pro-drop languages allowing indexical shift, use of a null form is required to refer to the attitude holder, which is the maximally salient entity satisfying the presupposition of the AUTH feature. Use of the overt form is therefore confined to 'pure indexical' cases, triggering the inference that its referent is not the most salient Author but some other referent satisfying AUTH - the speaker of the utterance, thus correctly deriving the shifting preference of *pro*.

Keywords: indexical shift, pronouns, reported speech, anaphora

References

Akkuş, Faruk. 2019. "Un-Shifting Indexicals". *Ms., UMass Amherst*.

Anand, Pranav. 2006. "De De Se". PhD thesis, MIT.

Anand, Pranav, and Andrew Nevins. 2004. "Shifty operators in changing contexts". In *Semantics and Linguistic Theory*, 14:20–37.

Deal, Amy Rose. 2020. *A Theory of Indexical Shift*. The MIT Press.

Heim, Irene. 2008. "Features on bound pronouns". In *Phi theory: Phi-features across modules and interfaces*, ed. by Daniel Harbour, David Adger, and Susana Béjar. Oxford University Press.

Katzir, Roni. 2007. "Structurally-defined alternatives". *Linguistics and Philosophy* 30 (6): 669–690.

Özyıldız, Deniz. 2012. "When I is not me: A preliminary case study of shifted indexicals in Turkish". *Ms, École Normale Superieure*.

Podobryaev, Alexander. 2014. "Persons, imposters, and monsters". PhD thesis, MIT.

Polinsky, Maria. 2015. "Embedded finite complements, indexical shift, and binding in Tsez". *Languages of the Caucasus* 1 (1).

Schlenker, Philippe. 2003. "A plea for monsters". *Linguistics and philosophy* 26 (1): 29–120.

Şener, Nilüfer Gültekin, and Serkan Şener. 2011. "Null subjects and indexicality in Turkish and Uyghur". In *Proceedings of WAFL 7*.

Indexicals under role shift in Sign Language of the Netherlands: experimental insights

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In order to report speech and other attitudes, sign languages (SLs) make use of a dedicated construction known as role shift (RS), in which the signer embodies the matrix attitude holder to report the content of the original utterance by using a complex of non-manual markers (RS-NMMs) such as eye gaze shifts, body leans, and head turns. These constructions famously exhibit total or partial shifting of indexicals, where the meaning of expressions such as *I* and *you* is 'shifted' from the context of utterance to the reported context (Friedman 1975; Meier 1990). This is exemplified in (1) for the SL of the Netherlands (NGT), where RS-NMMs are noted above the glosses, with underscore marking scope:

(1) IX_3 SAY QUICK $\overset{\text{gaze, head and body left}}{\overline{\text{IX}_1 \text{ DISABLE}}}$ [NGT corpus, Crasborn and Zwitserlood 2008]
'He$_i$ said straight away: "I$_i$ am disabled".'

A popular analysis in the formal semantics literature treats RS-NMMs as realizing a context-shifting operator, analogous to the one proposed for the indexical shift in spoken languages (**Sch17a**; Quer 2005). However, previous studies suggest that this might be too strong a conclusion. First, indexicals can fail to shift even when under the scope of RS-NMMs, as demonstrated in (2) for German SL (DGS), where the second person indexical IX_2 denotes the actual addressee:

(2) a. Felicia: IX_1 DREAM ANNA IX_3 LOTTO WIN
[DGS, Hübl, Maier, and Steinbach 2019: (28)]
'I have dreamed that Anna won the lottery.'

b. Tim reports to Anna: FELICIA $_3\text{INFORM}_1$ $\overset{\text{rs}}{\overline{\text{IX}_1 \text{ DREAM IX}_2 \text{ LOTTO WIN}}}$
'Felicia$_i$ told me$_T$, she$_i$ dreamed that you$_A$ won the lottery.'

Methodology. An experiment combining interpretation tasks and felicity judgments (5-point Likert scale) was carried out to investigate the interaction between RS-NMMs and indexical shift. 13 native NGT signers (26-58 y.o; 2 males) participated, each being presented with multiple sets of video-recorded pairs of signed dialogues. In each pair, the first video consisted of a dialogue between two signers, T. and C. (3a, 4a), and the second one, involving two different signers M. and J., consisted in M. reporting T's utterance (3b, 4b). They were three different conditions: (i) the type of indexical involved (IX_1 in (3), IX_2 in (4)), (ii) presence vs absence of RS-NMMs, and (iii) the original quote (3a, 4a) being presented or left out.

(3) a. IX_1 LOVE CYCLING
'I love cycling.'

b. T. SAY IX_1 LOVE CYCLING
'T. said I love cycling.'

(4) a. IX_2 SIGN VERY.WELL T. to C.
'You sign very well!'

b. T. SAY IX_2 SIGN VERY.WELL M. to J.

'T. said you sign very well!'

Each participant saw each combination of conditions (i-iii) in three different lexical variants, hence 24 stimuli + fillers. For each stimulus, participants first assessed the felicity of the report, then had to provide an interpretation for the indexical by choosing among the list of potential signers T., M., C. or J. Multiple choices were allowed.

Results. There was considerable variation across participants, whose responses formed three different clusters. Cluster 1 (5 participants) always interpreted IX_1 as being shifted, i.e., referring to the original author, T. For these, RS-NMMs did not influence the reference for IX_1. However, RS-NMMs did play a role in interpreting IX_2: if present, RS-NMMs elicited a shifted interpretation of IX_2, i.e., referring to the original addressee, C. Otherwise, IX_2 was interpreted as non-shifted., referring to the reported addressee, J. Cluster 2 (3 participants) exhibited a different response pattern, interpreting both indexicals as shifted in all of the conditions. Last, cluster 3 (5 participants) interpreted IX_1 as being unshifted or ambiguous irrespective of RS-NMMs. When asked to produce sentences with a shifted meaning, cluster 3 produced sentences involving a null form $\emptyset$ or a reflexive SELF. For all clusters, the presence of the context never influenced interpretation of indexicals, but did affect felicity scores: if interpretation clashed with the original utterance context, the respective mean score was significantly lower.

Keywords: sign language role shift, indexicals, pronouns, reported speech, anaphora

References

Crasborn, Onno A, and IEP Zwitserlood. 2008. "The Corpus NGT: an online corpus for professionals and laymen". In *Proceedings of the 3rd Workshop on the Representation and Processing of Sign Languages*. Paris: ELRA.

Friedman, Lynn A. 1975. "Space, time, and person reference in American Sign Language". *Language*: 940–961.

Hübl, Annika, Emar Maier, and Markus Steinbach. 2019. "To shift or not to shift: Quotation and attraction in DGS". *Sign Language & Linguistics* 22 (2): 171–209.

Meier, Richard P. 1990. "Person deixis in American sign language". In *Theoretical Issues in Sign Language Research, Volume 1: Linguistics*, ed. by Patricia Siple Susan D. Fischer, 1:175–190. The University of Chicago Press.

Quer, Josep. 2005. "Context shift and indexical variables in sign languages". In *Semantics and linguistic theory*, 15:152–168.

Deriving rationale clauses:
Dative infinitives, embedded imperatives, and modality

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OVERVIEW. The paper examines rationale clauses (RatCls) in Mari (Uralic; head-final, frequent pro-drop) and develops a comprehensive semantico-syntactic analysis in terms of a teleological modal inserted in MoodP that successfully captures their peculiar properties. The research fills in a gap in the description of Uralic, and contributes to the discussion of rationale clauses across the world's languages by bringing together and elaborating the existing semantic and syntactic approaches.

DATA. RatCls in Mari present two puzzles. ♦ **Infinitival RatCls**, which contain either controlled PRO or a referentially independent subject, are accompanied by an affixal dative postposition *lan* and the complementizer *manən*, the surface order of which indicates the structural sequence ... **T^0] P^0] C^0]** (1a). As I will show, the pattern cannot be analyzed in terms of post-syntactic reordering, and thus poses a problem for the theory of categorial selection. ♦ As RatCls, infinitives alternate with **embedded imperatives** (2b). This is unusual from a cross-linguistic perspective, as typically embedded imperatives appear in indirect speech contexts interpreted as commands or permissions (Kaufmann 2014 for an overview); however, no directive semantics is involved in the case of Mari RatCls.

(1) a. [Məlanna / PRO$_i$ kudəvečə-š pur-aš-**lan manən**], təj$_i$ pečə-m sümər-en-at.
we.DAT yard-ILL go-INF-DAT COMP you fence-ACC break-PST-2SG
'You broke the fence in order (for us) to get into the yard.'

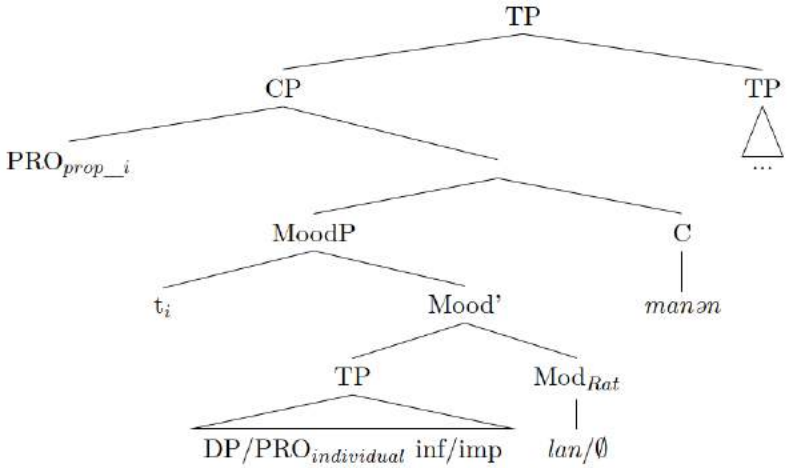
b. [Šort-**Ø** manən], me rveze-vlak-əm per-en-na.
cry-IMP COMP we boy-PL-ACC hit-PST-1PL
'We hit the boys in order for you to start crying.'

PROPOSAL. SEMANTICS. As a starting point I adopt the idea that RatCls contain a teleological modal operator (Mod$_{Rat}$; Nissenbaum 2005, Grosz 2014, Dąbkowski & AnderBois 2023), which is structurally inserted in the head of MoodP at the left periphery of the embedded clause (2). I further argue that in **infinitival RatCls** Mod$_{Rat}$ is spelled out as the marker identical to the dative postposition – *lan*. P$_{Dat}$ and Mod$_{Rat}$ are linked diachronically, and I explain the connection between the two by discussing the history of Uralic and the semantics of goal postpositions (Kracht 2002, Pantcheva 2011). In **embedded imperatives** Mod$_{Rat}$ is the covert imperative modal (cf. Kaufmann 2012, Stegovic 2018 on Mod$_{Imp}$) whose modal flavor is shifted to teleological.

(2) *Rationale modal* (p – embedded situation, q – matrix situation)
$[\![\text{Mod}_{Rat}]\!]^{a,w} = \lambda p_{st}.\lambda q_{st}.\forall w'[w' \text{ is compatible with the goals relevant to q: } p(w')]$

PROPOSAL. SYNTAX. I bring all types of constructions – controlled and non-controlled infinitives and imperatives – together and argue that they are built in the same way, as in (3).

(3)



The derivation proceeds as follows. (1) Mod_{Rat} inserted in $Mood^0$ combines with a saturated TP as its argument. (2) A proposition-type element, a silent minimal pronoun (PRO_{prop}), is merged in Spec,MoodP, saturating it. (3) MoodP combines with the general non-interrogative complementizer. (4) PRO_{prop} moves to Spec,CP becoming an operator, which turns the whole CP into a one-place predicate. The structure in (3) accommodates rationale imperatives, rationale infinitives with a DP/*pro* subject, and rationale infinitives with a PRO subject; in the full paper I show that the latter instantiate only non-obligatory control. Evidence for RatCls adjoining at TP level comes from their behavior under ellipsis and with a matrix negation.

CONCLUSION. The present research brings all rationale constructions together proposing a uniform analysis. It further opens the door to a study of the grammaticalization of adpositions into Mood (cf. P_{Dat} → Mod_{Rat}), expanding the discussion of the connection between the postpositional and extended verbal projection (cf. for instance grammaticalization of Ps into C in Romance, etc.). The proposed analysis for rationale imperatives can also be extended to account for the behavior of subjunctive rationale and purpose adjuncts, attested outside of the Uralic language family, for instance, in some Slavic and Romance languages.

Keywords: rationale clauses, modality, mood, infinitives, imperatives, control, Uralic

References

Dąbkowski, M. & S. AnderBois. 2023. Rationale and precautioning clauses: Insights from A'ingae. To appear in *Journal of Semantics*.

Grosz, P. 2014. Modal particles in rationale clauses and related constructions. In E. Leiss & W. Abraham (eds), Modes of modality, 263-290. Amsterdam: John Benjamins.

Kaufmann, M. 2012. Interpreting imperatives. Dordrecht: Springer.

Kaufmann, M. 2014. Embedded imperatives across languages: Too rare to expect, too frequent to ban. Ms.

Kracht, M. 2002. On the semantics of locatives. Linguistics and Philosophy 25:157-232.

Nissenbaum, J. 2005. Kissing Pedro Martinez: (Existential) anankastic conditionals and rationale clauses. In E. Georgala & J. Howell (eds), Proceedings of SALT XV. Ithaca, NY: CLC publications.

Pantcheva, M. 2011. Decomposing Path: The nanosyntax of directional expressions. PhD diss.

Stegovec, A. 2019. Perspectival control and obviation in directive clauses. Natural Language Semantics 27:47–94.

Verum Focus in Tigrinya

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Keywords: Tigrinya, Ethio-semitic, Verum Focus, Copula, Syntax

Höhle (1988) suggests that in German the accent produced by the speaker on the finite verb or the complementizer has the effect of emphasizing the expression of truth of a proposition that the speaker uttered, as in (1). He calls this phenomenon *Verum Focus*. Note, from the translation of (1), that English uses the *do* auxiliary to create the same effect.

(1) Q: *Hat Klaus den Computer repariert?*
has Klaus the computer repaired
'Did Klaus repair the computer?'
A: *Ja, er hat ihn repariert.*
yes he has it repaired
'Yes, he **did** repair it.' (from Hartman et al. 2008, 75, ex. 44)

A similar phenomenon is found in Tigrinya, a head-final Ethio-semitic language spoken in Eritrea and Ethiopia. The copula *ʔiju* is used in the context of individual-level predicates, as in (2), and occurs along with the prefix *kɨ-* attached to a verb to express future tense, as in (3).

(2) *nsa bɛlaħ ʔɨ-ja* (3) *ʔanɛ ħa-nti dmu kɨ-ø-gɛzɨʔ ʔɨ-jɛ* she intelligent.fs COP.PRES-3fs I one-fs cat.fs KI-1s-buy.IPFV COP.PRES.1s 'She is smart.' 'I will buy a cat'

Compare now examples (4a) with (4b) and (5a) with (5b): when it is added, the copula *ʔiju* strengthens the assertiveness of the sentence uttered. Note that the copula is found in final position, agrees with the subject of the sentence and is in present tense.

(4) a. *nsxa ʔɨt-a mɛʦ'ħaf hɨb-ka-jo*
you DEM-fs book.fs give.PFV-2ms-OM.3ms
'You gave him the book.'
b. *nsxa ʔɨt-a mɛʦ'ħaf hɨb-ka-jo* ***ʔɨ-xa***
you DEM-fs book.fs give.PFV-2ms-OM.3ms COP.PRES-2ms
'You **did** give him the book.'

(5) a. *ʔanɛ ʔɨz-a g^{w}al ʔɨzi-ʔa jɨ-fɛlt'-a*
I PROX-fs girl LPROX-fs 1s-know.IPFV-OM.fs
'I know this girl.'
b. *ʔanɛ ʔɨz-a g^{w}al ʔɨzi-ʔa jɨ-fɛlt'-a* ***ʔɨ-jɛ***
I PROX-fs girl LPROX-fs 1s-know.IPFV-OM.fs COP.PRES-1s

'I **do** know this girl.'

The phenomenon above cannot be considered "normal" focus: in fact, as also explained in Zellou (2010), in focus constructions in Tigrinya the copula is fronted, as in (6).

(6) *nsxa ʔɨt-a mɛʦ'ħaf **ʔi-xa** hɨb-ka-jo*
you DEM-fs book.fs COP.PRES-2ms give.PFV-2ms-OM.3ms
'<u>YOU</u> gave him the book.'

I suggest that the copula *ʔɨju* in Tigrinya (when not in a context with individual-level predicates or a future tense construction) is a marker of *Verum* Focus. Taking an antisymmetric approach to head-finality (Kayne 1994) and building on Höhle (1992) and Gutzmann et al. (2020), I propose a segmental analysis of Verum Focus in Tigrinya, in which the copula is raised from its argument position in the verbal domain to the head of a left peripheral MoodP projection (Lohnstein 2018) merged right above FinP that carries a feature [+VER]. The copula appears in final position because of the remnant movement of FinP in the specifier of MoodP. The derivation of (4b) is schematized in (7) below.

(7) [MoodP [FinP$_j$ … *ʔɨta mɛʦ'ħaf hɨbka-jo* … ***t*$_i$…**] [Mood$'$[Mood$^\circ$ ***ʔɨxa*$_i$**][$_{tj}$]]]

In the talk, I will develop in more detail the analysis proposed above and I will also try to relate this use of the copula to the two other uses mentioned, namely future-marking and individual level predication. To conclude, Tigrinya provides morphosyntactic evidence for a segmental localization of VERUM.

References

Gutzmann, Daniel, Katharina Hartmann, and Lisa Matthewson. 2020. "Verum Focus Is Verum, Not Focus: Cross-Linguistic Evidence." *Glossa: a journal of general linguistics* 5 (1): 51,1-48.

Hartmann, Katharina, Peggy Jacob, and Malte Zimmermann. 2008. "Focus Asymmetries in Bura." *Interdisciplinary Studies on Information Structure* 10: 45–92.

Höhle, Tilman N. 1988. "Vorwort Und Nachwort Zu Verumfokus." *Sprache un Pragmatik* 5(1): 1–7.

Höhle, Tilman N. 1992. "Über Verumfokus Im Deutschen" *Sonderheft der Linguistischen Berichte* 4: 112–41.

Kayne, Richard S. 1994. *The Antisymmetry of Syntax*. Cambridge (Mass.): The MIT Press.

Lohnstein, Horst. 2018. "Verum Focus, Sentence Mood, and Contrast." In *The Grammatical Realization of Polarity Contrast: Theoretical, Empirical, and Typological Approaches*, Linguistik Aktuell/Linguistics Today, Amsterdam/Philadelphia: John Benjamins Publishing Company, 55–88.

Zellou, Georgia. 2010. "Tigrinya Fronted Copula Constructions: Focus and Evidence of Speaker Marking Information Relevant to Hearer Expectations." *Rice Working Papers in Linguistics* 2(Spring): 1–16.

Syncretism of prepositions and prefixes in Czech

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Introduction. Some Czech prepositions, e.g., *pod* 'under,' have at least four different uses, illustrated in (1)-(4). (1) shows a prototypical preposition, (2) an incorporated preposition, (3) contains a verbal particle/prefix and (4) has a verbal particle in a nominalized verb.

(1) **pod** zemí (2) **pod**-zemí (3) **pod**-letět (4) **pod**-let under ground under-ground under-fly under-fly 'under the ground' 'the underground 'to fly under' 'a flight under'

The four uses can be differentiated by the two properties in (5) and (6).

(5) *A dichotomy based on the nature of the complement (verbal vs. nominal)* a. **prepositional markers** in (1) and (2) attach to nominal (object-denoting) roots b. **verbal particles** in (3)-(4) attach to verbal (event-denoting) roots

(6) *A dichotomy based on the boundary between the adposition and its complement* a. **free morphemes** with a low degree of prosodic integration, as in (1) and (3) b. **bound morphemes** with higher degree of integration, as in (2) and (4)

Our goal is to show how the two parameters are reflected by the shape of the morphemes, and how we can understand the four-way ambiguity of morphemes such as *pod* 'under'. **The preposition vs. particle distinction (5)** accounts for the behavior of adpositions like 'over/ across.' When 'over' is used with object-denoting complements, it has the shape ***přes***, see (1') and (2'). With an event-denoting complement (a verb), it has the shape *pře*, see (3') and (4').

(1') ***přes*** hranice (2') ***přes***-hraničí (3') ***pře***-letět (4') ***pře***-let across border across-border over-fly over-fly 'across the border' 'a transborder region' 'to fly over' 'an overflight'

The same distinction is relevant also for items like *mimo* 'outside,' which can only be used in contexts such as (1)/(2), but not (3)/(4). There are also verbal particles (prefixes) like *vz-* 'up,' which can only be used in contexts like (3)/(4), but not (1)/(2).

The bound vs. free distinction (6) is needed for adpositions that have one form for contexts like (1)/(3) and a different form for the contexts (2)/(4). For quite a few markers (though not all), the two contexts differ by vowel length (Scheer 2001, Ziková 2012, Caha & Ziková 2016).

(1'') ***při*** zemi (2'') ***pří***-zemí (3'') ***při***-letět (4'') ***pří***-let at ground at-ground at-fly at-fly 'at the ground' 'ground floor' 'to fly at' 'arrival'

Syncretism. The facts discussed up to now reveal that there are form-identity relations depicted as in (7). The numbers in (7) track the example number. The blue arrow corresponds to the free/bound distinction. The red arrows indicates the event/object distinction. Each of the functions linked in (7) can be syncretic with one another. (7) also entails a restriction on syncretism similar to the *ABA constraints (Caha 2009, Bobaljik, 2012): (1) and (4) cannot

by syncretic unless either (2) or (3) is syncretic with the two; *mutatis mutandis* for (2) and (3).

(7) (4)
(2) (3) (1)

(8) BP
B ResP **Res** P

(9) a. (1) = [P] b. (3) = [Res [P]] c. (4) = [B [Res [P]]] d. (2) = [B [P]]

Implementation. To capture the syncretism relations in (7), we propose the structure (8). This is a version of a nesting structure known to deliver *ABA. The lowest feature (P) corresponds to the prepositional use (1), see (9a). The verbal particle uses (3) and (4) have an additional feature Res (for result), see (9b,c). We adopt this feature from Ramchand (2008) who proposes that Slavic particles move from P to Res. Finally, the feature B (for bound) characterises the bound forms, namely the bound verbal particle (4) and the bound preposition (2), see (9c-d). We show that if we adopt the Nanosyntax theory of spellout, including pointers (Taraldsen 2019, Caha 2022), we can derive the syncretisms as in (7).

Conclusions. Our talk establishes that there are four distinct flavors of P morphemes in Czech. Based on their form, we group the uses into natural classes depending on the nature of the complement (5) and the strength of the boundary between the P element and the complement (6). Combined with Nanosyntax model of spellout, this approach neatly accounts both for the observed cases of syncretism including the restrictions on it.

Keywords: Slavic prefixes; syncretism; nanosyntax

References

Biskup, P. (2019). *Prepositions, case and verbal prefixes*. Amsterdam: John Benjamins.
Bobaljik, J. D. (2012). *Universals in comparative morphology*. Cambridge, MA: MIT Press.
Caha, P. (2009). *The nanosyntax of case.* PhD diss., University of Tromsø. Caha, P. (2022). The marking of mass, count and plural denotations in multi‑dimensional paradigms. *Studia Linguistica*, *76*(1), 212-274.
Caha, P., & Ziková, M. (2016). Vowel length as evidence for a distinction between free and bound prefixes in Czech. *Acta Linguistica Hungarica*, *63*(3), 331-377.
Gribanova, V. (2009). Phonological evidence for a distinction between Russian prepositions and prefixes. In *Studies in formal Slavic phonology, morphology, syntax, semantics and information structure,* edited by Zybatow et al., 383—396. Frankfurt: Peter Lang.
Matushansky, O. (2002). On formal identity of Russian prefixes and prepositions. *MIT working papers in linguistics*, *42*, 217-253.
Scheer, T. 2001. The rhythmic law in Czech: Vowel-final prefixes. In *Current Issues in Formal Slavic Linguistics*, edited by Zybatow et al., 37–48. Frankfurt: Peter Lang. Taraldsen, T. (2019). Syncretism in multidimensional paradigms. *Linguistics Vanguard*, *5*(1). Ziková, M. 2012. Lexical prefixes and templatic domains: Prefix lengthening in Czech. In *Slavic Languages in Formal Grammar*, edited by Ziková et al., 325–338. Frankfurt: Peter Lang.

Subjects of Verbs of Perception and Cognition in Czech

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Quirky subjects are non-NOM subjects, typically in a lexical case such as DAT or ACC. Czech is a NOM-ACC, pro-drop language with rather rich inflectional morphology. Its default case is NOM if no other case is assigned as, for example, in left dislocation, or in control constructions. Some NPs in Czech could qualify as quirky subjects in the sense of Russian (Moore 2000), Icelandic (Sigurðsson 2002), or German (Eyþórsson and Barðdal 2005). Verbs of perception and cognition require an NP that is typically theta marked as an experiencer and is either in DAT 0 or less frequently in ACC (2). The syntactic subject NP which agrees with the verb is a 3rd person neuter dummy *to* "it" which needs to be covert.

(1) (*To) **Janovi** je špatně /skvěle
it Jan$_{DAT}$ is$_{N}$ sick /great
'Jan is sick/great.'

(2) **Danu** bolí u srdce
Dana$_{ACC}$ hurts$_{N}$ at heart$_{GEN.SG.N}$
'Dana's heart aches.'

With stative verbs requiring DAT, this case seems to be the only option. While with active verbs, the experiencer can assume NOM (3).

(3) a. **Evě** se nechce pracovat.
Eva$_{DAT}$ REFL not-wants$_{N}$ work$_{INF}$
'Eva doesn't feel like working.'

b. **Eva** nechce pracovat.
Eva$_{DAT}$ not-wants$_{F}$ work$_{INF}$
'Eva doesn't want to work.'

Subject-like datives are frequent in Indo-European languages. According to a Barðdal & Eythórsson's (2009) hypothesis, this might be an inheritance from Proto-Indo-European, which was a **stative–active language** rather than NOM-ACC, and the subjects of stative intransitives were case marked in the oblique. The question is to what degree can these non-NOM NPs be considered subject-like. To find out, we apply a series of quirky subjecthood tests introduced by Zaenen et al. (1985) and Poole (2015), including the anaphora binding, PRO control, and reduced relatives. These tests are connected to the Quirky Subject Hierarchy (QSH) scale: binding ≫ PRO ≫ reduced relatives. This means that if the quirky subjects in a given language allow reduced relatives, then they are sure to allow PRO control structures as well as binding anaphors. The subjecthood tests are represented in the following examples, which test the anaphora binding (4), PRO control (5), and reduced relatives (6) respectively.
The other standard subjecthood tests, such as ECM, raising to subject and conjunction reduction are not suitable for Czech because of its typology. The raising is next to non-existent, ECM is limited to a closed class of verbs and conjunction reduction does not work in this rich inflection pro-drop language.

(4) a. Petrovi$_x$ se líbí **jeho$_x$** /***své$_x$** nové auto.
Petr$_{DAT}$ REFL like$_{3SG.N}$ his$_{OBJ.NOM}$ /his$_{SUB.NOM}$ new$_{NOM}$ car$_{NOM}$
'Peter likes his new car.'

b. Zábly ho$_i$ **jeho$_i$** /***svoje$_i$** ruce.
feel-called$_{3PL}$ him$_{ACC}$ his$_{OBJ.NOM}$ his$_{SUB.NOM}$ hands
'His hands felt cold.'

c. Bylo mu$_i$ teplo v **jeho$_i$** /**své$_i$** bundě.
was$_{3SG.N}$ him$_{ACC}$ warm in his$_{OBJ.NOM}$ /his$_{SUB.NOM}$ jacket$_{LOC}$
'He felt warm in his jacket.'

(5) a. **Člověku$_x$** může [PRO$_x$ být dobře samotnému].
person$_{DAT}$ can$_{3SG.N}$ be$_{INF}$ well alone$_{DAT}$
'A person can be well alone.'

b. **Petrovi$_x$** se nechtělo [PRO$_x$ cestovat samotnému].
Petr$_{DAT}$ REFL did-not-want$_{3SG.N}$ travel$_{INF}$ alone$_{DAT}$
'Peter did not want to travel alone.'

(6) studenti, **které** škrábe v krku – ***škrábající** **v krku**
students$_{NOM}$ who$_{ACC}$ scrape$_{3SG.N}$ in throat – scraping in throat
'students who have a sore (scraping) throat'

The example (4)c shows that it is possible to use either subject or object anaphoric binding pronoun, but this applies to the dummy "it" verbal agreement only. For verbs that show agreement with some other NOM NP, only the object binding pronoun is possible for both DAT and ACC NPs (4)a-b. The PRO control tests (5) are only possible for structures with the dummy "it" verbal agreement. The reduced relative test (6) is not passable for Czech non-nominative NPs of any kind. It turns out that the experiencers are not structural subjects. They are theta marked by the matrix verb and in the absence of another overt NOM NP, the DAT NPs (not the ACC ones) can gain some subject-like properties.

Keywords: verbs of perception; dative; accusative; subjecthood; thematic roles

References

Barðdal, Jóhanna, and Thórhallur Eythórsson. 2009. "The Origin of the Oblique-subject Construction: An Indo-European Comparison." In *Grammatical Change in Indo-European Languages*, edited by Vit Bubenik, John Hewson and Sarah Rose, 179–193. Amsterdam: John Benjamins.

Eyþórsson, Þórhallur, and Jóhanna Barðdal. 2005. "Oblique Subjects: A Common Germanic Inheritance." *Language* 81: 824–881.

Moore, John, and David Perlmutter. 2000. "What Does it Take to Be a Dative Subject?" *Natural Language and Linguistic Theory* 18: 373–416.

Poole, Ethan. 2015. "Deconstructing Quirky Subjects." In *Proceedings of NELS 45*, edited by Thuy Bui and Deniz Özyıldız. 1–12.

Sigurðsson, Halldór Ármann. 2002. "To Be an Oblique Subject: Russian vs. Icelandic. "*Natural Language and Linguistic Theory* 20: 691–724.

Zaenen, Annie, Joan Maling, & Höskuldur Þráinsson. 1985. "Case and Grammatical Functions: The Icelandic Passive." *Natural Language and Linguistic Theory* 3: 441–483.

Word-stress and the minimal word constraint in English

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My presentation aims to demonstrate that the minimal word constraint and the assignment of word-stress in English can be captured by the same machinery within the framework of strict CV-phonology.[1]

In order to be able to grasp the parallel between the minimal word constraint and the principle that governs the assignment of English word-stress, we have to part with some of the credos of standard strict CV phonology. Contrary to mainstream assumptions, I wish to argue for bidirectional government in Phonology. Unidirectional theories have been promoted mainly in the standard strict CV phonological literature. For Lowenstamm (1996), Scheer (2004), Szigetvári (1999) – among others – government is strictly right-to-left, while for Rowicka (1997) it is left-to-right. One of my goals is to demonstrate that government goes in both directions but in a principled manner, following a strict algorithm. This can only be achieved, however, if we also quit the view that government can only target empty vocalic positions.

By amending these two traditional tenets of standard strict CV phonology, we can easily capture the parallel between vowel-reduction and vowel-zero alternation (syncope).

In order to be able to capture the essence of word-stress assignment in English, we will introduce the notions of sub-minimal, minimal and optimal CV-feet. The structural properties of CV-feet are, of course, different from those of traditional phonological feet. Nevertheless, the introduction of the concept of CV-feet also allows us to draw a parallel between traditional trochaic feet on the one hand and long vowels and diphthongs on the other. As a result of the analysis, we will arrive at the conclusion that contrary to mainstream assumptions, only two degrees of English word stress can be distinguished, a position also supported by Szigetvári (2017) and (2020). Stressed and unstressed syllables are distributed along the skeleton, the latter being accompanied by vowel reduction. The difference between primary and secondary stress follows directly from the ranking of different types of CV-feet. Syllables that have been regarded as strong unstressed syllables will also be viewed as stressed ones in the present framework. This view seems to be supported by interesting pieces of phonological evidence including absence of foot-initial consonant lenition, absence of syncope before a stressed vowel and the "Withgott-effect" discussed, for example, by Balogné Bérces (2015).

The proposal will hopefully shed light on how stress related issues can be accounted for in terms of lateral structural relationships in a non-arboreal phonological framework.

Keywords: strict CV, syncope, CV-feet, the minimal word constraint, government

References

[1] Strict CV Phonology was initiated by Lowenstamm (1996) and was further developed by Rowicka (1999), Dienes & Szigetvári (1999), Szigetvári (1999, 2000, 2007), Csides (2002, 2008), Ségéral & Scheer (1999), Scheer (2004), Scheer& Szigetvári (2005) among others. It must be emphasised that Strict CV phonology is a radical offspring of Standard Government Phonology (GP), initiated originally by Kaye, Lowenstamm & Vergnaud (1985, 1990), Kaye (1990), Charette (1990, 1991), Harris (1990) among others. It was further developed and applied to a massive number of languages in various books, articles by – among others – Harris (1990, 1992, 1994, 1997) and many others

Balogné Bérces, Katalin. 2015. Consonant lenition inside and outside the "minimal foot". *Acta Linguistica Hungarica 62.* 141-145.
Charette, Monik. 1990. Licence to govern. *Phonology 7*. 233-253.
Charette, Monik. 1991. *Conditions on Phonological Government*. Cambridge: CUP.
Csides, Csaba. 2002. Licence to properly govern. *SOAS Working Papers in Linguistics 12.* 67-88. London: SOAS, University of London.
Csides, Csaba. 2008. *Structural Relations and Government in Phonology*. Saarbrücken: VDM Verlag Dr. Müller.
Dienes, Péter & Péter Szigetvári. 1999. Repartitioning the skeleton: VC Phonology. Ms., Budapest: Eötvös Loránd University.
Harris, John. 1990. Segmental complexity and phonological government. *Phonology 7*. 255-300.
Harris, John. 1992. Licensing inheritance. *UCL Working Papers in Linguistics 4.* 359–406.
Harris, John. 1994. *English Sound Structure*. Oxford: Blackwell.
Harris, John. 1997. Licensing Inheritance: an integrated theory of neutralisation. *Phonology 14.* 315-370
Kaye, Jonathan. 1990. Coda Licensing. *Phonology 7.* 301–330.
Kaye, Jonathan, Jean Lowenstamm and Jean-Roger Vergnaud. 1985. The internal structure of phonological elements: a theory of charm and government. *Phonology Yearbook 2*. 305–328.
Kaye, Jonathan, Jean Lowenstamm and Jean-Roger Vergnaud. 1990. Constituent structure and government in phonology. *Phonology 7*. 193–231.
Lowenstamm, Jean. 1996. CV as the only syllable type. Ms., Université Paris 7. Appeared in Durand & Laks 1996: 419-442.
Rowicka, Grazyna. 1999. *On Ghost Vowels: A Strict CV Approach*. The Hague: Holland Academic Graphics.
Scheer, Tobias. 2004. *A Lateral Theory of Phonology, vol. 1: What is CVCV, and why should it be?* Berlin: Mouton de Gruyter.
Scheer, Tobias & Peter Szigetvári. 2005. Unified representations for stress and the syllable. *Phonology 22*. 37-75.
Ségéral, Philippe & Tobias Scheer. 1999. The Coda Mirror. Ms., Université de Paris and Université de Nice.
Szigetvári, Péter. 1999. VC Phonology: a theory of consonant lenition and phonotactics. PhD diss., Budapest: Eötvös Loránd University
Szigetvári, Péter. 2000. Why CVCV. *The Even Yearbook 4*. 117-152. Budapest: ELTE SEAS Working Papers in Linguistics.
Szigetvári, Péter. 2007. Branching onsets and syncope in English. *Language Sciences 29*. 408-425. Amsterdam: Elsevier.
Szigetvári, Péter. 2017. English stress is binary and lexical. In. Lindsey Geoff and Andrew Nevins (eds). *Sonic Signatures.* 264-275. Amsterdam: John Benjamins.
Szigetvári, Péter. 2020. Posttonic stress in English. In: Jaskuła, Krzysztof (ed.) *Phonological and Phonetic Explorations.* 163-189. Lublin: Wydawnictwo KUL.

Stress-Sensitivity, Truncation, and Umlaut with an English Diminutive

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1 INTRODUCTION. I analyze new facts about the English diminutive suffix /-i/ (written <-(e)y/-ie>), which has been the subject of little research:

(1) a. dog → doggy
b. bird → birdy
c. horse → horsie
d. sheep → sheepie
e. foot → footie
f. snack → snackie

I argue that this morpheme is subject to the Optimalty-Theoretic phonological constraint defined in (2) below:

(2) ALIGN('σ-DIM)
*Assign a * if diminutive /-i/ is not right-adjacent to a stressed syllable.*

First, I show that (2) motivates **deletion of material to achieve stress-adjacency**, a possibility expected if alignment is a matter of rankable phonological constraints (McCarthy & Prince 1993, 1998, a.o.). Second, I show that a homophonous adjective suffix is not subject to (2), revealing that this constraint is specific to the diminutive. This provides new evidence for **morpheme-specific phonological constraints** (Pater 2007, a.o.). The generalizations reported here are corroborated by 11 native speakers so far.

2 STRESS AND TRUNCATION. Since mono-syllabic nouns are inherently stressed, the forms in (1) above are expected. Further, given (2), we accurately predict that this diminutive is acceptable with multi-syllabic stress-final nouns (3) but not with those that end in unstressed syllables (4):

(3) a. giraffe [ʤɪ.ˈɹæf] → ✓giraffie
b. raccoon [ɹæ.ˈkun] → ✓racoonie
c. gazelle [gə.ˈzɛl] → ✓gazellie
d. tangerine [tæn.ʤə.ˈɹin] → ✓tangeriney

(4) a. elephant [ˈɛ.lə.fɪnt] → *elephantie
b. badger [ˈbæ.ʤɹ] → *badgerie
c. hamster [ˈhæm.stɹ] → *hamsterie
d. chipmunk [ˈʧɪp.məŋk] → *chipmunkie

Importantly, however, deletion of the material between the nearest stressed syllable and the diminutive morpheme facilitates diminutives of non-stress-final nouns (5):

(5) a. hamster ([ˈhæm.stɹ]) → *hamsterie / ✓hammie (intervening [stɹ] deleted)
b. chipmunk ([ˈʧɪp.məŋk]) → *chipmunkie / ✓chippie (intervening [məŋk] deleted)
c. elephant ([ˈɛ.lə.fɪnt]) → *elephantie / ✓?ellie (intervening [əfɪnt] deleted)
d. computer ([kəm.ˈpju.tɹ]) → *computerie / ✓computie (intervening [ɹ] deleted)

Specifically, enough material is deleted so that the word is syllabified such that the syllable left of the diminutive is stressed. In contrast, epenthesis to achieve stress-adjacency is unattested. This entails the constraint ranking DEP > ALIGN('σ-DIM) > MAX.

3 MORPHEME-SPECIFICITY. Comparison with the homophonous adjectival suffix /-i/ reveals that the diminutive-specific ALIGN('σ-DIM) is necessary, rather than a general constraint on suffixes of the form /-i/. This is because this adjectival suffix need not be stress-adjacent, as

(6) below shows. The bolded forms in (6) are homophonous with failed diminutive forms from (4/5) above, which are acceptable in (6) due to being interpretable as adjectives rather than diminutives:

(6) a. Drinking water with your nose is a very **elephanty** thing to do.
b. John hasn't cleaned his hamster's cage, so his room has a **hamstery** smell.
c. I don't understand **computery** stuff like coding.

4 CONCLUSION. These findings reveal that this diminutive is subject to a morpheme-specific phonological constraint. The existence of such constraints supports theories where phonology and morphology function in tandem (Wolf 2008, 2009, a.o.). I will also discuss morphological effects of the diminutive, which I show optionally blocks ablaut in irregular plurals (✓*mice* / **mouses,* ✓*micies* / ✓*mousies*), and argue that this emerges from variance in morpheme assignment timing (Deal & Wolf 2017).

Keywords: diminutive; phonology; morphology; stress; truncation

References

Deal, Amy Rose, and Matthew Wolf. 2017. Outwards-sensitive phonologically-conditioned allomorphy in Nez Perce. In *The morphosyntax-phonology connection: Locality and directionality at the interface*, ed. Vera Gribanova and Stephanie Shih. Oxford University Press.

McCarthy, John & Alan Prince. 1993. Generalized alignment. In Geert Booij & Jaap van Marle (eds.), *Yearbook of Morphology*, 79–153. Dordrecht: Kluwer.

McCarthy, John & Alan Prince. 1998. Prosodic morphology. In Andrew Spencer & Arnold Zwicky (eds.), *The Handbook of Morphology*, 283–305. Oxford: Blackwell.

Pater, Joe. 2007. The Locus of Exceptionality: Morpheme-Specific Phonology as Constraint Indexation. *University of Massachusetts Occasional Papers 32: Papers in Optimality Theory III* p. 259 - 296.

Wolf, Matthew. 2008. *Optimal interleaving: Serial phonology-morphology interaction in a constraint-based model.* PhD Dissertation, University of Massachusetts Amherst.

Wolf, Matthew. 2009. Lexical insertion occurs in the phonological component. Tranel, Bernard (ed.), *Understanding Allomorphy: Perspectives from Optimality Theory*, London: Equinox.

The morpho-syntax of vulgar verbal morphology in Korean and beyond

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1 Introduction: We describe and analyze two affixes in Korean, the prefix *che-* (AUX_1) and suffix *-essa* (AUX_2), using judgments elicited from native speakers. As far as we know, these are undocumented by previous research. Both of these morphemes attach to verbs, and encode condescension towards the subject of the sentence. We analyze the semantics, morphology and syntax of these morphemes, compare them with a similar morpheme in Japanese, and discuss the morpho-syntax of (im)politeness in these languages more generally.

2 Morphological and semantic facts: Korean almost universally uses suffixal morphology (like other 'Altaic' languages), but it has a few prefixes. Previous literature has observed that Korean has a prefix negator *an(i)-* and a negative modal *mos-* (see Chung (2007) and references therein). We observe a third prefix, *che-*, exemplified in (1) below, which indicates that the speaker has a disparaging attitude towards the subject:

(1) Cyay **che**-nemecy-essta!
3SG AUX_1-fall-PST
'(S)he fell!'

This morpheme is considered vulgar, and is thus highly inappropriate in formal contexts. This morpheme has an intensifying effect and encodes a negative attitude towards the subject of the sentence, though it does not affect the sentence's truth-conditional semantics. Its meaning is somewhat similar to some uses of the English vulgar adverb *fucking*, as in *'I fucking hate it!'*. Thus we should ask whether *che-* in fact represents an adverbial phrase rather than a bound prefix, since prefixes are rare in Korean. Fortunately, we can see that *che-* is indeed a prefix, since it can appear between the verb and the aforementioned prefixes *an(i)-* and *mos-*:

(2) Kyay kuke [mos/an]-**che**-mek-tela!
3SG it NEG.MOD/NEG-AUX_1-eat-PST
'(S)he didn't/couldn't eat it!'

Essentially the same meaning is contributed by another morpheme, the suffix *-essa*, as in (3). Both *che-* and *-essa* can co-occur on the same verb, as in (4):

(3) Kyay emcheng mek-**essa**-tela!
3SG much eat-AUX_2-PST
'(S)he ate a lot!'

a. Kyay emcheng **che**-mek-**essa**-tela!
3SG much AUX_1-eat-AUX_2-PST
'(S)he ate a lot!!'

3 The morpho-syntax of (im)politeness: These Korean morphemes appear similar to a vulgar intensification suffix in Japanese, *-yagaru* (Stefan et al. 2001), which has also received little notice in linguistic research:

(4) Koboshi-**yagat**-ta
spill-AUX-PST
'I/(s)he/etc. spilled it!' (Japanese)

Both Korean and Japanese have politeness-sensitive verbal morphology. Miyagawa (2017) argues that such morphology in Japanese, among other languages, has systematic structural properties suggesting that politeness is encoded in these languages' syntax. Building from Miyagawa's proposals, we hypothesize that the syntactic pieces responsible for the expression of politeness in these languages should also be capable of facilitating grammatical expressions of impoliteness, like those we've shown above. Specifically, extending Miyagawa's analysis of the Japanese polite auxiliary *-mas*, we argue that the impolite morphemes we've seen above are manifestations of an auxiliary phrase that sits between the VP and TP/IP:

(5) $[_{CP}\ [_{TP/IP}\ [_{AuxP}\ [_{VP}\ \mathrm{V}^0\ ]\ \boxed{\mathrm{Aux}^0}\ ]\ \mathrm{T}^0/\mathrm{I}^0\ ]\ \mathrm{C}^0\ ]$

We argue that this analysis makes correct predictions about the syntax and morphology of these morphemes, and show that Chung's (2007) head-movement analysis of the Korean prefixes *an(i)-* and *mos-* straightforwardly captures the prefix-hood of *che-* as well.

In conclusion, we argue that this examination reveals informative parallels between the morpho-syntax of politeness, a topic of growing interest, and impoliteness, whose grammatical expression is infrequently studied.

Keywords: korean; morphology; syntax; (im)politeness

References

Chung, Inkie. 2007. Suppletive negation in Korean and Distributed Morphology. *Lingua*.

Kaiser, Stefan & Yasuko Ichikawa & Noriko Kobayashi & Hirofumi Yamamoto. 2001. *Japanese - A Comprehensive Grammar*. Routledge.

Miyagawa, Shigeru. 2017. *Agreement Beyond Phi*. MIT Press Linguistic Inquiry Monographs.

Anatomy of a Complex Numeral: Overcounting in Ch'ol

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This paper provides the first syntactic analysis of complex numerals in Ch'ol, a Mayan language (Chiapas, Mexico). Ch'ol simplex numerals are followed by a numeral classifier tracking the animacy or shape/disposition of the noun (1). The language is vigesimal: 20 and its powers have a distinguished role in that they form the basis of complex numerals and occupy the classifier slot, making it impossible for a 'regular' classifier to appear: (1) vs. (3).

(1) ux-kojty wakax
three-CL.animal cow
'three cows' (Bale et al., 2019) simplex numeral

(2) juñ-k'al, cha'-k'al, ux-k'al
one-CL.20 two-CL.20 three-CL.20
'twenty, forty, sixty' (lit. one-20, two-20s, three-20s) (Vázquez Álvarez, 2011)

(3) ux-k'al wakax, *ux-k'al-kojty wakax
three-CL.20 cow three-CL.20-CL cow
'sixty cows' sixty cows (Bale et al., 2019)

Complex numerals between multiples of 20 employ an overcounting pattern: they comprise a numeral in the 1–19 range (the 'prospective') and the next higher multiple of 20 (4). For instance, 22 is expressed with the juxtaposition of 2 and 40 (5). As shown in (5), the 'prospective' is followed by a 'regular' classifier (matching the animacy or shape/disposition of N). Since the second numeral of the complex is a multiple of 20, it has 20 in the post-numeral classifier slot. This second numeral is preceded by a 3SG prefix (belonging to Set A, which cross-references ergative arguments on verbs and possessors on possessed nouns).

(4) Num-Cl(regular) A3-Num-Cl(multiple-of-20) N Ch'ol template

(5) cha'-p'ej i-cha'-k'al N
two-CL A3-two-CL.20 N
'twenty two Ns' (Bale et al., 2019) overcounting

I adopt Ionin and Matushansky's (2018) idea developed for additive and subtractive numerals: complex numerals involve a syntactic relationship between two full NumPs, both complete with a Num (possibly a Cl) and an N. The two NumPs share the same listeme in the N slot (6), which allows one of the Ns to be deleted under identity. That the prospective itself is also in a local relationship with a token of N receives support from the fact that its own classifier reflects the animacy and shape of N; a case of s-selection under locality. Further

support for two tokens of N being involved in overcounting numerals comes from Ainu (Paleo-Siberian isolate), where both copies of N must be overt (7).

(6) [NumP Num (Cl) N] [NumP Num (Cl) N] complex numerals, as per I&M (2018)

(7) wan **pa** e-tu-hot-ne **pa**
ten year linker-two-set-COP year
'thirty years' (Tamura, 1988/2000, glosses mine) Ainu

As for the 3SG marker on the second numeral, I suggest that here it is a case of possessive agreement. I propose that this numeral involves a hidden possessive structure, with a silent noun GROUP or SET as the possessee, the phrase containing the multiple of 20 and the noun as the possessor, and the A3 morphology coding regular possessive agreement. [For comparison, a garden variety possessive NP appears in (9).] There is independent support for the idea that numerals can be possessors of an abstract noun: in mathematical operations the multiplicand is literally 'the number of Num' (10), with the same 3SG marker.

(8) [xNP i-GROUP/ SET-cha'-k'al N]
A3-GROUP/SET-two-CL.20 N
Lit: 'the set/group of two-twenty Ns'

(9) y-ijñam aj-Wañ Xañtyes
A3-wife NCL-Juan Sanchez
'Juan Sanchez's wife' (Vázquez Álvarez, 2011)

(10) Cha'-sujtyel **i-tsikol** **ux-p'ej** wäk-p'ej tyi i-pejtyelel
two-CL:times POSS.3-number three-CL six-CL prep POSS.3-all
2 × 3 = 6 (Lit. '2 times the number of 3 is 6 in all') (Little et al., 2022)

I suggest that the two parts of the complex numeral are linked by phonologically null P, the covert counterpart of the 'toward' P seen in Mansi (Uralic) overcounting numerals (11). The P-as-connector proposal for Ch'ol fits within the known patterns of the language: additives (used for numerals between 11 and 19) employ a relational noun connector (which projects a PP: (12)). The silence of the P here is akin to P-drop in English dialectal *going pub*.

(11) wāt nupəl ak^{w}a
thirty toward one
'twenty one' (Riese, 2001)

(12) luhum-p'ehl **yik'ot** wək-p'ehl
ten-CL.general with six-CL.general
'sixteen' (Aulie, 1957)

Keywords: complex numeral; overcounting; possession; Ch'ol

Part-whole structure and NPIs licensing: experimental evidence

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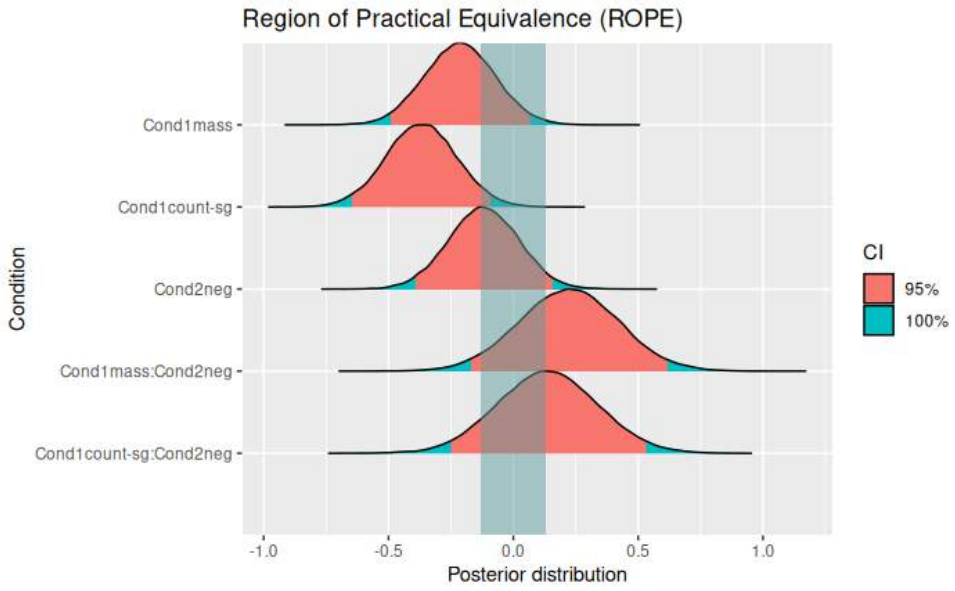
Background. Recent debates concerning the licensing of Negative Polarity Items (NPIs) in the scope of singular/plural definite descriptions (sg/pl DDs) seem to agree that pl DDs are valid licensors of NPIs while sg DDs are not (see Lahiri; Guerzoni a Sharvit; Gajewski a Hsieh; Chierchia but see Hoeksema for a dissenting view). This seems problematic for Strawsonian-Downward-entailing (SDE) approaches (like Fintel a.o.) since the maximality presupposition makes both sg DDs and pl DDs SDE. Nevertheless, the pattern can be explained if we assume that the extension of pluralized predicates includes 0 (unlike sg pred.) and if we extend the notion of entailment to individuals ($\alpha_{\langle e \rangle} \models \beta_{\langle e \rangle}$ iff $\beta \leq_i \alpha$ after Gajewski a Hsieh). Such a move leads to many open questions: (i) if it is the part-whole structure of pl DDs (inhibiting NPIs licensing), do mass nouns (tightly related to pl predicates) also license NPIs? (ii) are the pluralized DDs (as operators) the only factor determining NPIs licensing or do we have take into account the polarity of the whole environment? To address both questions, we designed an experiment testing acceptability of sg, pl, and mass DDs continuing in the footsteps of Gajewski.

(1) V galerii se konala aukce. {$_{\text{Mass}}$ Umění /$_{\text{CountPl}}$ Obrazy /$_{\text{CountSg}}$ Obraz} se sebemenší chybičkou se {$_{\text{AffSg}}$ vrátilo /$_{\text{AffPl}}$ vrátily /$_{\text{NegSg}}$ nepodařilo /$_{\text{NegPl}}$ nepodařily}.
In gallery.LOC REFL hold.3.SG.PAST auction. art painting.PL painting.SG with slight.SUP flaw REFL return.3.SG.PAST seller.DAT return.3.PL.PAST seller.DAT succeed.3.SG.PAST.NEG monetize.INF succeed.3.PL.PAST.NEG monetize.INF .
'An auction was held in the gallery. The {art/paintings/painting} with the slightest flaw {was/were returned to the seller/did not succeed to be monetized}.'

Experiment. The experiment studied the interaction between NPIs and count/mass nouns in Czech. Participants judged the acceptability of sentences with weak NPIs, *sebemenší N* 'the slightest N', using the 5-point Likert scale (5=best, 1=worst). The weak NPIs appeared in the scope of three DDs, shown in (1): (1) mass nouns, (2) count sg nouns, (3) count pl nouns. To ensure DD interpretation of the licensors, the bridging (Schwarz) type of context was used. Testing the acceptability of weak NPIs was used as a test of hypothesis (i): whether the part-whole structure of mass and pl nouns is self-sufficient for NPIs licensing. The standard view of NPIs licensing, Boolean entailment, doesn't predict licensing at the DP level, but the extended notion of entailment (between individuals) explains it. To test the predictions of Boolean vs. individual-based entailment, the polarity of each environment was varied (positive vs. negative). There were 24 exp. items, in 3x2 conditions, and 24 fillers. 29 Czech speakers passed the fillers of the experiment (online on PCIbex). The Bayesian random-effects multilevel model

with default priors was fit using the R package RSTANARM (Goodrich et al.): the dependent variable was the subject's response; the independent variables were: (1) type of the noun (MASS, COUNT-SG, COUNT-PL), (2) polarity of the sentence (AFF, NEG), and their interaction; the reference level was COUNT-PL, AFF. Using the model, we found that (1) pl DDs are the best licensors of NPIs (median, $\tilde{\mu}$, Intercept $= 3.98$, $\approx \mu$ = 3.97 in EDA), (2) sg count DDs are significantly worse ($\tilde{\mu} = -0.37$, 95% Confidence Interval, CI $= \langle -0.65, -0.09 \rangle$, 0.28% in ROPE), (3) mass DDs are not significantly worse NPIs licensors than pl DDs ($\tilde{\mu} = -0.37$, CI $= \langle -0.50, 0.06 \rangle$, 19.03% in ROPE), (3) negation makes the licensing non-significantly worse ($\tilde{\mu} = -0.12$, CI $= \langle -0.39, 0.16 \rangle$, 40.16% in ROPE), (4) the other interactions are non-significant (see also Fig.1).

Theoretical consequences. The experimental results support the following two answers to the research questions: (i) NPIs can be licensed by DDs with divisive interpretation (pl and mass DDs), (ii) polarity computation is local and doesn't involve the polarity of the main predicate. The results are more compatible with the individual-based notion of entailment and bring empirical support for the operator-based theories of NPIs licensing.



Obrázek 1: Bayesian model

Keywords: NPI; mass nouns; count nouns

References

Chierchia, Gennaro. "Factivity meets polarity: On two differences between Italian versus English factives". In *The semantics of plurals, focus, degrees, and times*, 111–134. Springer, 2019.
Fintel, Kai von. "NPI licensing, Strawson entailment, and context dependency". Publisher: Oxford University Press1[]Publisher: Oxford University Press, *Journal of semantics* 16, č. 2 (1999): 97–148.
Gajewski, Jon. "Another Look at NPIs in Definite Descriptions: An Experimental Approach" [**inlang**en]. In *Negation and Polarity: Experimental Perspectives*, ed. Pierre Larrivée a Chungmin Lee, 1:307–327. Series Title: Language, Cognition, and Mind1[]Series Title: Language, Cognition, and Mind. Cham: Springer International Publishing, 2016. ISBN: 978-3-319-17463-1 978-3-319-17464-8, cit. 26. 09. 2022. https://doi.org/10.1007/978-3-319-17464-8_13. http://link.springer.com/10.1007/978-3-319-17464-8_13.
Gajewski, Jon, a I.-ta Chris Hsieh. "Comments on negative polarity items in definite description". *The art and craft of semantics: A Festschrift for Irene Heim* 1 (2014): 181–198.
Goodrich, Ben, et al. *rstanarm: Bayesian applied regression modeling via Stan*. R package version 2.21.31[]R package version 2.21.3, 2022. https://mc-stan.org/rstanarm/.
Guerzoni, Elena, a Yael Sharvit. "A question of strength: on NPIs in interrogative clauses" [**inlang**en]. *Linguistics and Philosophy* 30, č. 3 (čvn. 2007): 361–391. ISSN: 1573-0549, cit. 05. 12. 2022. https://doi.org/10.1007/s10988-007-9014-x. https://doi.org/10.1007/s10988-007-9014-x.
Hoeksema, Jack. "There is no number effect in the licensing of negative polarity items: a reply to Guerzoni and Sharvit" [**inlang**en]. *Linguistics and Philosophy* 31, č. 4 (srp. 2008): 397–407. ISSN: 1573-0549, cit. 05. 12. 2022. https://doi.org/10.1007/s10988-008-9041-2. https://doi.org/10.1007/s10988-008-9041-2.
Lahiri, Utpal. "Focus and Negative Polarity in Hindi" [**inlang**en]. *Natural Language Semantics* 6, č. 1 (břez. 1998): 57–123. ISSN: 1572-865X, cit. 05. 12. 2022. https://doi.org/10.1023/A:1008211808250. https://doi.org/10.1023/A:1008211808250.
Schwarz, Florian. "Two Kinds of Definites Cross-linguistically". *Language and Linguistics Compass* 7, č. 10 (2013): 534–559. https://doi.org/https://doi.org/10.1111/lnc3.12048. eprint: https://compass.onlinelibrary.wiley.com/doi/pdf/10.1111/lnc3.12048. https://compass.onlinelibrary.wiley.com/doi/abs/10.1111/lnc3.12048.

The acquisition of distributive and cumulative readings: experimental evidence from Czech children

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Background. Singular universal distributive quantifiers (UQs) like *each boy* in (1) are (in this syntactic position) interpreted obligatorily distributively (the first boy drew a dog and a cat, the second boy drew a hamster and a cat, e.g.) and resist a cumulative interpretation (the first boy drew a dog and second boy drew a cat, e.g.). Numerical NPs like *two boys* in (3) allow both interpretations even if the distributive interpretation is usually reported as less prominent (in adult grammar). This can be linguistically explained as a case of conversational implicature where the distributive interpretation of the NumNP is backgrounded by the existence of the unambiguous distributive expression in the language (see Horn and Dotlačil for the specific application to definite plurals). It is known that children acquire this linguistic knowledge (concerning UQs) gradually and for a long time interpret UQs collectively/non-distributively (see Brooks and Braine; Syrett and Musolino; Pagliarini, Fiorin, and Dotlačil a.o.). In our experiment, we followed the acquisition studies and collected data from Czech children concerning their interpretation of UQs (see (2)) and bare NPs (see (4)). Unlike previous studies, we didn't focus on the distributive vs. collective interpretation of UQs and definite NPs. But, we scrutinized Czech UQs and bareNPs concerning their distributive and cumulative interpretation (since definiteness in Czech as a grammatical category is questionable at least, see Šimík and Demian). Our research questions were two: (i) What is the learning curve of UQs/bareNPs? (ii) Can the acquisition level of Czech UQs predict the rejection of the distributive reading of bareNPs (following the conversational implicature explanation)?

Experiment. 214 Czech children (age range: 5 - 11, median age: 7) and 47 Czech adults (median age: 24) passed the fillers of the experiment (online on PCIbex), example conditions in (2)/(4) and crossed pictures of conditions in Figs. 2 & 3. The Bayesian logistic random-effects multilevel model with default priors was fit using the R package RSTANARM (Goodrich et al.): the dependent variable was the subject's answer (checkmark: the image corresponds to the sentence vs. cross: the image and the sentence don't correspond); the independent variables were: (1) the condition (UNIVDISTR, UNIVCUMUL, BAREDISTR, BARECUMUL), (2) age of the subject (in case of children), and their interaction; the reference level was BARECUMUL. Using the model, we found that for adults: (1) the distributive interpretation of UQs is acceptable to the same extent as the cumulative interpretation of bareNPs – reference lev. – ($\tilde{\mu} = 0.12$, 95% Confidence Interval, CI $= \langle 0.05, 0.18 \rangle$, 32.29% in ROPE), (2) distributive interpretation of bareNPs is much worse than the reference level ($\tilde{\mu} = -0.48$, CI $= \langle -0.56, -0.41 \rangle$, 0% in ROPE), (3) cumulative interpretation of UQs is also much worse than ref. lev. ($\tilde{\mu} = -0.77$, CI $= \langle -0.84, -0.69 \rangle$, 0% in ROPE). For children: (1) the distributive interpretation of UQs is the same as the reference level ($\tilde{\mu} = -0.13$, CI $= \langle -0.42, 0.13 \rangle$, 40.29% in ROPE) and this remains stable during the acquisition (non-significant interaction effect UNIVDISTR by AGE: $\tilde{\mu} = 0.15$, CI $= \langle 0.01, 0.30 \rangle$, 22.82% in ROPE), (2) unlike adults, chil-

dren accept the distributive interpretation of bareNPs to the same extent as the reference lev. ($\tilde{\mu} = 0.21$, CI $= \langle -0.07, 0.47 \rangle$, 21.21% in ROPE) and at least in the sample the development towards adults state is non-significant (the interaction between BAREDISTR and AGE: $\tilde{\mu} = -0.07$, CI $= \langle -0.21, 0.07 \rangle$, 64.03% in ROPE), (3) cumulative interpretation of UQs is as a main effect indistinguishable from the reference level ($\tilde{\mu} = 0.58$, CI $= \langle 0.31, 0.85 \rangle$, 0% in ROPE) but there is a clear development towards adult grammar (the interaction between UNIVCUMUL and AGE is a strong negative effect: $\tilde{\mu} = -0.49$, CI $= \langle -0.63, -0.34 \rangle$, 0% in ROPE), (4) the cumulative interpretation of bareNPs is strongly acceptable (ref. level – the intercept: $\tilde{\mu} = 1.08$, CI $= \langle 0.86, 1.30 \rangle$) and doesn't change during acquisition (the main effect of AGE is non-significant: $\tilde{\mu} = -0.16$, CI $= \langle -0.27, -0.04 \rangle$, 14.42% in ROPE).

Theoretical consequences. Czech children acquire (age: 5 to 11) the correct interpretation of the UQs: they start with accepting both its distributive and cumulative interpretation but end with the adult-like rejection of the second interpretation (the answer to question 1). This clearly must precede the conversational implicature stage of adults, where the distributive interpretation of numerical NPs is (mostly) rejected (suggests a positive answer to question 2).

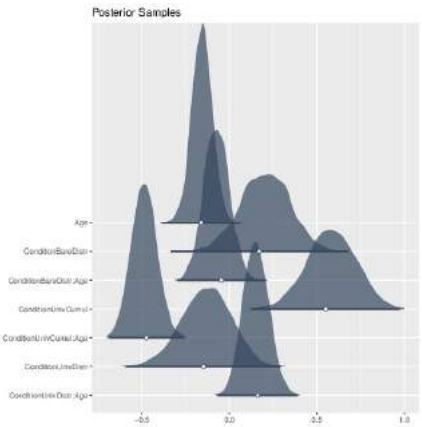

Figure 1: Bayesian model

Figure 2: Test picture – distributive reading

Figure 3: Test picture – cumulative reading

(1) Each boy drew two animals.

(2) Každé dítě si koupilo dva bonbóny.
each child REFL buy.3.SG.PAST two sweet.PL
'Each child bought two sweets.'

(3) Two boys drew two animals.

(4) Děti si koupily dva bonbóny.
child.PL REFL buy.3.PL.PAST two sweet.PL
'Children bought two sweets.'

References

Brooks, Patricia J, and Martin DS Braine. "What do children know about the universal quantifiers all and each?" *Cognition* 60, no. 3 (1996): 235–268.
Dotlačil, Jakub. "Anaphora and distributivity: A study of same, different, reciprocals and others". PhD thesis, Netherlands Graduate School of Linguistics, 2010.
Goodrich, Ben, et al. *rstanarm: Bayesian applied regression modeling via Stan.* R package version 2.21.31[]R package version 2.21.3, 2022. https://mc-stan.org/rstanarm/.
Horn, Laurence. *A natural history of negation*. Chicago: University of Chicago Press, 1989.
Pagliarini, Elena, Gaetano Fiorin, and Jakub Dotlačil. "The acquisition of distributivity in pluralities". In *Proceedings of the Annual Boston University Conference on Language Development*, 2:387–399. 2012.
Syrett, Kristen, and Julien Musolino. "Collectivity, distributivity, and the interpretation of plural numerical expressions in child and adult language". *Language acquisition* 20, no. 4 (2013): 259–291.
Šimík, Radek, and Christoph Demian. "Definiteness, uniqueness, and maximality in languages with and without articles". *Journal of Semantics* 37, no. 3 (2020): 311–366. https://doi.org/10.1093/jos/ffaa002.

Using *ten* as a definite article with associative anaphora: An empirical study of colloquial Czech

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The objective of the present study, based both on corpus data and the questionnaire method, is to provide support for the claim that there exists, in contemporary informal spoken Czech, a growing tendency to use *ten* as a definite article with definite associative anaphora (DAA). In addition to the analysis of 54 occurrences of DAA identified within a 1,000-occurrence sample of randomly selected *ten* NPs in Ortofon v1, a corpus of informal spoken Czech of app. one million words, we solicited the judgement of 10 native speakers of Czech via a questionnaire. Like its Western Slavic cognates, the distance-neutral demonstrative *ten* displays characteristics typical of definite articles (cf. Czardybon 2017; Dvořák 2020). One of these characteristics is the expansion of *ten* to contexts situated between pragmatic and semantic definiteness, including DAA. However, there are marked differences between the three sub-types of DAA as defined by Löbner with regards to their proclivity and capacity to take *ten*. These sub-types are referred to as the "part-whole" (cf. a car → the engine), the "relational" (cf. a bus → the driver) and the "situational" sub-type (cf. going to the cinema → the film). The corpus data and the consultants' judgements clearly show that *ten* is most acceptable in contexts of situational DAAs:

DAA sub-type	**N° of occurrences**
Situational	34
Relational	18
Part-whole	2
Total	**54**

Table 1: Numbers of occurrences of *ten* analyzed as cases of the three sub-types of DAA in the sample of 1,000 demonstrative NPs of ORTOFON v1.

Besides 34 occurrences of the situational type, 18 cases were analyzed as belonging to the relational type. As regards the possibility for *ten* to appear with the part-whole type, it seems rather difficult to appraise, since other factors must also be taken into account, such as the speaker's emotional involvement and competing interpretations of *ten*:

(1) já jsem se byl-a totiž podívat i v tom
I.NOM AUX.PST.1SG REFL be.PTCP-SG.F actually see.INF even in ten.M.LOC.SG
byt-ě v tom jejich nov-ým
flat-LOC.SG in ten.M.LOC.SG theirs-M.LOC.SG new-M.LOC.SG
no m-a-j to jakože parádn-í
MOD have-PRS-3PL that.N.ACC.SG MOD fabulous-N.ACC.SG
jakože uzpůsoben-í ***těch*** ***pokoj-ů*** a todle
MOD layout-ACC.SG ten.M.GEN.PL room-GEN.PL and MOD

cause I went to see the flat, I mean their new flat
well, it's really like fabulous like the layout of ***the rooms*** and stuff

It is well-known that in the case of DAAs, the definiteness of the head noun is triggered by "a hidden link or anchor which has to be introduced earlier" (Löbner 1998, 1). The noun *místnosti* ('rooms') can indeed act as such an anchor in (1). Yet the presence of *ten* also seems to be strongly encouraged here by the speaker's emotional attitude to the related facts. Furthermore, what is not completely clear is the role played by various inferences intervening in the anchor-retrieving process. The study attempts to show these inferences are particularly important within the situational sub-type, as the hearer often has to work out that the argument takes the form of the previously mentioned situation in its totality. In (2), *ta kukla* ('the pupa') can only be construed as the one of the entire pupating process:

(2) S1:	proces	uzdraven-í	..	jak	to	vlastně	děl-á-š?
	process.NOM.SG	healing-GEN.SG		how	that.N.ACC.SG	MOD	do-PRS-2SG
S2:	no	zakukl-í-m	se	a	čeká-m	až	z
	MOD	pupate-PRS-1SG	REFL	and	wait-PRS-1SG	until	from
	té	***kukl-y***	se	vylíhn-e	zdrav-ý		člověk
	ten.F.GEN.SG	pupa-GEN.SG	REFL	emerge-FUT.3SG	healthy-M.NOM.SG		person.NOM.SG

S1: a healing process – how do you actually do that?
S2: well, I pupate and then I wait until a healthy person emerges from ***the pupa***

Keywords: definite associative anaphora; Czech; emerging definite article; *ten*

References

Carlier, Anne, and Walter De Mulder. 2011. "The grammaticalization of definite articles." In *The Oxford Handbook of Grammaticalization*, edited by Bernd Heine and Heiko Narrog, 522–534. Oxford – New York: Oxford University Press.

Clark, Herbert H. 1975. "Bridging". In *Theoretical Issues in Natural Language Processing*, edited by Roger Schank and Bonnie Nash-Webber, 169–174. New York: Association for Computing Machinery.

Czardybon, Adrian. 2017. *Definiteness in a Language without Articles – A Study on Polish*. Düsseldorf: Düsseldorf University Press.

Dvořák, Jan. 2020. "The Emerging Definite Article *Ten* in (Informal Spoken) Czech: A Further Analysis in Terms of Semantic and Pragmatic Definiteness". *Naše řeč*, 103(4): 297–319.

Himmelmann, Niklaus. 1997. *Deiktikon, Artikel, Nominalphrase: Zur Emergenz syntaktischer Struktur*. Berlin: De Gruyter.

Löbner, Sebastian. 2011. "Concept types and determination". *Journal of Semantics*, 28(3): 279–333.

Löbner, Sebastian. 1998. "Definite associative anaphora". In *Approaches to Discourse Anaphora: Proceedings of DAARC96,* edited by Simon Philip Botley. Lancaster: University Centre for Computer Corpus Research on Language.

Mathesius, Vilém. 1926. "Přívlastkové *ten*, *ta*, *to* v hovorové češtině". *Naše řeč*, 10(2): 39–41.

Schwarz, Florian. 2009. "Two Types of Definites in Natural Language." PhD diss., University of Massachusetts.

Corpus Ortofon [online; version 1 from 28th December 2017]. 2017. Prague: The Institute of the Czech National Corpus. Accessed March 26, 2023. http://www.korpus.cz.

Universal Syntactic Features of Open Categories

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It is a commonplace that syntactic features are a central device in formal grammar, and that they can sometimes be uninterpreted. In the 1977 Formal Syntax Conference, N. Chomsky remarked that the central categories of syntax (N, V, A and P) are based on non-linguistic cognition, e.g. the perception of concrete objects, actions, properties of varying intensity, and locations in space-time (cf. also Croft 1991). This paper develops such ideas, and provides a predictive formalization of them. It starts with the category Noun.

(1) **Mass Nouns**. There is a dichotomy between countable and mass nouns. That is, nouns can refer to entities other than cognitive objects.
   a. **Quantity**. There are qualitatively more countable nouns than mass nouns
   b. **Morpho-syntax**. Count nouns have extensions that mass nouns lack: e.g. Plurals.
   c. **Complex Semantics**. Count nouns have more complex meanings than mass nouns.
   d. **Pro-forms** for count nouns are typically overt (*ones*) while for mass nouns they can be null.

Some nouns are both: argument, *beer, difference, noise*.
Guided by categorial parsimony, this paper claims that there is no feature COUNT/ MASS separate from N (of 'small n' if you will). A Mass Noun is simply a noun whose N feature is not interpreted at LF. An uninterpreted N is called 'canceled.' Thus, the only category/feature of a typical count noun is 'n', while that of a mass noun is 'n$_{Ø}$'.

(2) **Cancellation**. In Logical Form, the interpretive content of a canceled lexical category X is invisible, and is notated X$_{Ø}$. An X without Cancellation I will call a 'full X'. An X with Cancellation I will call a 'purely formal X.

The same process and notation generalizes across the open class lexical categories. The Canceled verbs are what the literature calls 'stative,' going back to Vendler (1957) and Lakoff and Ross (1968). A Stative verb does not have an Agent subject that can 'do something':

(3) **Stative Verbs**. *be* (most uses), *believe, belong, (dis)like, envy, fear, hate, have* (most uses), *know, lack, like, love, need, owe, own, possess, want, ...*

The only categories/ features involved here are v and v$_{Ø}$. There is no V, ACTIVITY, or STATIVE. In any case, the label 'Activity' doesn't correspond to common sense semantics: *do nothing, sleep all day, sit motionless,* etc. are +Activity, despite not being activities. All verbs (thousands) are '+Activity' except for several dozen Statives (=−Activity); cf. (1a). Stative verbs are generally infelicitous in the progressive and also in imperatives, which require Agents. In other words, the more numerous Activity Verbs have morphosyntactic extensions, namely progressive and imperative, cf. (1b). It seems obvious that the semantics of open class verbs can be much more complex than that of statives cf. (1c). Pro-forms for (unmarked) Activity verbs tend to be overt (*do so, do it),* while those for marked Stative verbs can be null, like VP ellipsis cf. (1d).

Previous work has expressed canceled features by ad hoc "semantic features", such as ±Count and ±Activity. Such labels provide no explanatory semantic basis; and are purely taxonomic, and non-parsimoniously overlap with syntactic categories/ features such as V and N.

(4) **Non-locative Ps**. Theories must distinguish full locational P from grammatical P.
   a. **Quantity**. There are many more space-time locational P than grammatical P.
   b. **Morpho-syntactic extensions**. The intensifier *right* can modify (even sometimes idiomatic) P of space-time, but not grammatical $P_{Ø}$. For locational P the extensions are via compounding with *there/here: thereon, thereby, therefrom*, etc. (van Riemsdijk 1978).
   c. **More complex semantics of full locational P**. In many languages full P systematically cross-classify "surface", "interior" and "direction" vs. "toward" and "away from." Purely formal grammatical $P_{Ø}$ are never this complex.
   d. **Null allomorphs of $P_{Ø}$.**

Among English purely formal $P_{Ø}$, *in* alternates with a null allomorph when the head N is *way*. The *for* with noun phrases of temporal duration also alternates with a zero allomorph (*an hour, three months, a long time).* While the pro-forms for full PP of space-time are overt: *here, there, now, then*, the grammars of Classical Greek and Latin note that PPs of physical location must be overt P.

(5) **Non-Gradable As.**
   a. **Quantity**. Many more As are gradable (full A) than are non-gradable (formal AØ).
   b. **Morpho-syntactic extensions are** illustrated by the system of comparative and superlative degrees of adjectives. These unavailable extensions define the class of $A_{Ø}$.
   c. **More complex meanings of gradable A**.
   d. **Null allomorphs of $A_{Ø}$ (= $a_{Ø}$).** A standard modifier of A is *so: Mary seems so (nervous), remains so (unhappy).* When *so* appears alone, it means that A has a null allomorph.

(6) **Cancellation Feature +Ø**. The category with a feature +Ø is not interpreted at Logical Form.

The lexical categories that are +Ø are thus Mass Nouns, Stative Verbs, non-locative Prepositions, and non-Gradable Adjectives. The realis subset of I and the non-referential Determiners are also +Ø. Note that these are smaller than the semantically full categories of I (modals) and D (quantifiers and definite pronouns.

If Stative verbs are V, +Ø, we understand why they inflect and in most constructions act just like Activity verbs, that is, both classes move, inflect and assign case alike. With this feature +Ø, we can understand why the category I of modals (and of Romance subjunctives and conditionals) can act syntactically like e.g. English finite inflections. In short, Modals are I, and finite inflections are fewer in number than modals, are I, +Ø. Both classes predictably share, e.g., the NICE properties. By virtue of the Cancellation Feature, a purely syntactic device, we can eliminate postulating a separate set of semantic features that overlap with the central syntactic categories in a quite redundant way. The result is a set of categories which parsimoniously moves toward an overall conflation and identification of syntax and semantics.

References

Croft, William. 1991. *Syntactic Categories and Grammatical Relations*. Chicago: University of Chicago Press.

Lakoff, George and John Ross. 1966. *A Criterion for Verb Phrase Constituency*. Report National Science Foundation 17. Cambridge: Harvard Computation Laboratory.

Riemsdijk, Henk van. 1978. *A Case Study in Syntactic Markedness*. Dordrecht: Foris.

Vender, Zeno. 1957. "Verbs and Times." *The Philosophical Review* 66 (2):143-160.

Semantic and syntactic anomalies in Czech: an ERP study

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Event-related potentials (ERPs) recorded by the EEG (electroencephalography) are neural responses that occur in reaction to specific stimuli and represent a useful tool for studying language cognition, including sentence processing. Two of the most common language ERPs are the N400 and P600. The N400 component is a negative wave peaking at about 400 milliseconds after stimulus that violates a semantic prediction (Kutas & Hillyard, 1980). The P600 is a slightly later, positive-going wave peaking at about 600 milliseconds after a syntactic anomaly (Osterhout & Holcomb, 1992).

We conducted an ERP experiment to assess whether these effects replicate in Czech. We presented sentences using a rapid serial visual presentation (RSVP) paradigm, where words were presented one by one orthographically on a computer screen, each word for 300 ms followed by a blank screen for another 300 ms. The final word in a sentence was followed by a 1-second pause and a plausibility question. Correct sentences were randomly mixed with semantically or syntactically disrupted sentences, with the anomaly always at the end of the sentence. Semantic anomalies were divided into two types, namely, abstract words (N=15, Example 1), and concrete words (N=15, Example 2). Syntactic anomalies were also divided into two categories, both including a direct object omission form a sentence with a single object (N= 15, Example 3) or with a double object (N=15, Example 4).

(1) Sousedé v noci zaslechli hluk letící *ironie.* (At night, neighbors heard the noise of a flying *irony*.)
(2) Sousedé v noci zaslechli hluk letící *růže.* (At night, neighbors heard the noise of a flying *rose*.)
(3) *Muž najal k obsluze obchodu. (*To run the store, a man hired.)
(4) *Terorista v zahraničí vyrobil komplicovi. (*For his accomplice, a terrorist abroad made.)

Data of 17 right-handed Czech-speaking adults were analyzed (additional 13 subjects who were left-handed or had bad data were excluded). The results show a significant difference between semantically appropriate and inappropriate words in the time region between 300 and 500 milliseconds after word onset (Fig 1), indicating a N400 effect, in line with previous studies. Interestingly, semantic violations also elicited a difference in the P600 component, which has previously been reported for semantically anomalous words with high cloze probability. We also replicate the observation that concrete words typically generate greater response than abstract words (Barber et al., 2013).

For syntactically correct versus incorrect sentences, a P600 effect at about 800 ms after word onset was found only in in case of dative objects (Fig 2): less conspicuous violations seem to elicit smaller ERPs. Data from a grammaticality judgment task (N=78) confirmed that sentences with missing direct objects and without indirect objects were rated as more acceptable, which may explain why there was no difference in ERPs in this condition. In conclusion, we report the N400 and P600 ERP components for semantic and syntactic anomalies in Czech; their relation to cloze probability and grammaticality will be discussed at the conference.

Figure 1

Grand average ERPs to the final word in semantically appropriate and inappropriate sentences

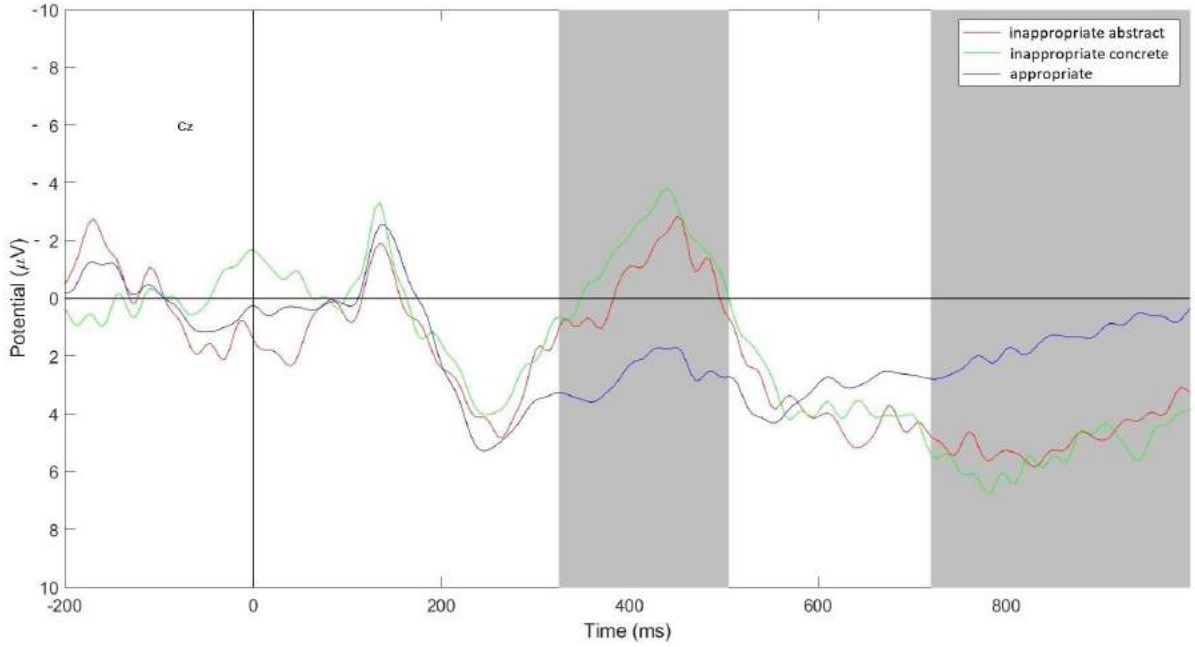
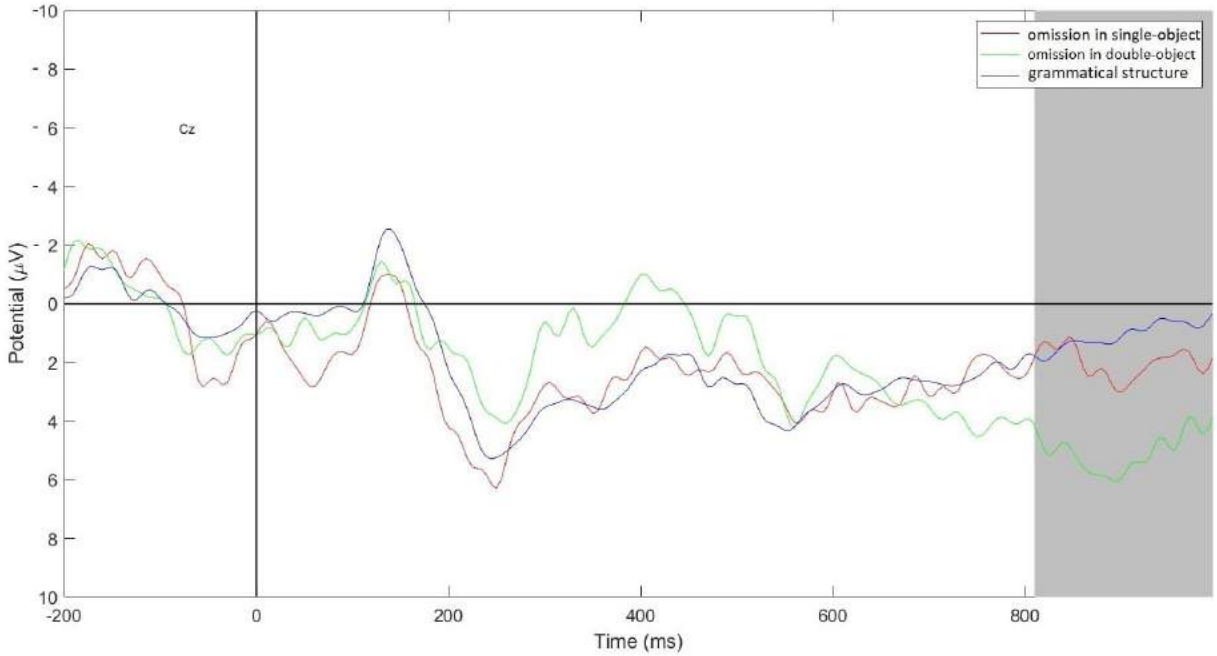


Figure 2

Grand average ERPs to the final word in syntactically correct and incorrect sentences (direct object omission)



References

Barber, Horacio A., Leun J. Otten, Stavroula-Thaleia Kousta, and Gabriella Vigliocco. 2013. "Concreteness in word processing: ERP and behavioral effects in a lexical decision task." *Brain and language* 125: 47-53.

Kutas, Marta, and Steven A. Hillyard. 1980. "Reading senseless sentences: Brain potentials reflect semantic incongruity." *Science* 207: 203-205.

Osterhout, Lee, and Phillip J. Holcomb. 1992. "Event-related brain potentials elicited by syntactic anomaly." *Journal of memory and language* 31: 785-806.

Quotative uses of Polish similative demonstratives

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This paper presents strategies of direct quotation that employ two similative demonstratives (SDs), adverbial *tak* 'so/like so' and adjectival *tak-i* 'such/like this', in colloquial spoken Polish. Emphasis is placed on two verbless quotative strategies: NP *tak* and NP *tak-i*, as in (1) and (2), respectively. (Note that the second coordinate in (1), the speech-introducing clause, lacks a verb and over subject NP.)

(1)
a on taki oburzony no nie w tym momencie na mnie
and he TAKI indignant PART no in this moment on me
i ***tak*** *"to ty wolisz? nie to ty wolisz słuchać jakiejś bajery niż prawdy?"*
and TAK so you prefer no so you prefer listen some bullshit than truth
'And he (is/was) kind of indignant, right? at me at that moment, and (is/was) **like**, "So you prefer…? no, so you prefer to listen to some bullshit than the truth?"'

(2)
ja ***taka*** *"eee okej"*
I TAKI-F uhh okay
'I (am/was) **like**, "Uhh, okay"'

Quotative uses of SDs have been noted cross-linguistically (e.g. Cameron 1998; Golato 2000; Güldemann 2008; Buchstaller & Van Alphen 2021; König 2015, 2017; Næss et al. 2020), but in Polish they have not been studied yet outside the canonical 'say'+'so' pairing. The source of data in this paper is Spokes – a corpus of casual conversational Polish (Pęzik 2015). A sample of 89 data points collected from 5.5 hours of recordings was analysed, and the observed use patterns are the following. The ways in which Polish *tak* and *tak-i* encode, respectively, manner and quality in exophoric, endophoric and cataphoric uses is also reflected in their quotative uses, i.e. in examples like (1) the quoted material is likely to represent words that had been actually uttered (a manner reading), while the quoted discourse in (2) is likely to be a constructed and enacted representation of the reported speaker's attitude/state of mind (a quality reading) ('I was like, "Uhh, okay"' = 'I was surprised/shocked/not in the mood to argue').

There is some usage overlap: in cases like (1) and (2), *tak* and *tak-i* are interchangeable. However, in examples such as (3), the inherent manner and quality semantics comes into play:

(3)
coś się mu wkręciło i ***taki*** *był "ha ha hi hi"*

something REFL him got.into and TAKI was <laughter>
i nagle tym telefonem ***tak*** *"jeb"*
and suddenly this-INST telephone-INST TAK bam!
'Something got into him, and he was **like**, "Ha ha hee hee", and suddenly (he went) **like**, "Bam!" with his phone'

Tak-i and *tak* are not interchangeable in (3). *taki był "ha ha hi hi"* requires a quality SD to describe some properties of the speaker, while *i (on) nagle tym telefonem tak "jeb"* requires a manner SD to describe the manner with which the phone was thrown away. *Tak-i* is thus geared towards quality readings, and *tak* towards manner readings, in accordance with their respective inherent properties.

Further, for NP *tak* and NP *tak-i*, I offer two different accounts of their emergence, invoking mechanisms of grammaticalization, constructionalization, and pragmaticalization. As will be argued, NP *tak* is a reduced clause (originally NP VERB *tak*), while NP *taki* is a stacking of two independent quotative strategies: a self-standing NP on the one hand, and *taki* on the other. (In the talk, I will review these and other alternative quotative strategies in spoken Polish). The study contributes to our understanding of how SDs are recruited in clause combining tasks involving the integration of direct quotes – actually uttered or constructed – into speakers' utterances.

Keywords: direct quotation; similative demonstratives; quality and manner semantics; colloquial spoken Polish

References

Cameron, Richard. 1998. "A Variable Syntax of Speech, Gesture, and Sound Effect: Direct Quotations in Spanish." *Language Variation and Change* 10: 43–83.

Buchstaller, Isabelle, and Ingrid Van Alphen (eds.). 2012. *Quotatives. Cross-Linguistic and Cross-Disciplinary Perspectives*. Amsterdam: John Benjamins.

Golato, Andrea. 2000. An Innovative German Quotative for Reporting on Embodied Actions: *Und ich so/und er so* 'and I'm like/and he's like'. *Journal of Pragmatics* 32: 29–54.

Güldemann, Tom. 2008. *Quotative Indexes in African Languages. A Synchronic and Diachronic Survey.* [Empirical Approaches to Language Typology 34]. Berlin: De Gruyter Mouton.

König, Ekkehard. 2015. "Manner Deixis as Source of Grammatical Markers in Indo-European Languages." In *Perspectives on Historical Syntax*, edited by Carlotta Vitti, 35–60. Amsterdam: John Benjamins.

König, Ekkehard. 2017. "The deictic identification of similarity." In *Similative and Equative Constructions: A Cross-Linguistic Perspective*, edited by Yvonne Treis & Martine Vanhove, 143–163. Amsterdam: John Benjamins.

Næss, Åshild, Anna Margetts and Yvonne Treis. (eds.). 2020. *Demonstratives in Discourse*. Berlin: Language Science Press.

Pęzik, Piotr. 2015. "Spokes – a Search and Exploration Service for Conversational Corpus Data." In *Selected Papers from the CLARIN 2014 Conference*, edited by Jan Odijk, 99–109. Linköping: Linköping University Electronic Press. [Spokes available on-line, URL: http://spokes.clarin-pl.eu; accessed July, 2021]

Few ≠ Not Many

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Klima (1964) claims that *few* is a spell out of *not many*, on analogy to *no* spelling out *not any*. Fleshing out this idea, McNally (1998) claims *few* is an allomorph of *many* that must occur in the scope of covert negation, while Solt (2006) claims that *few* has a negative component that is passed up the tree until a truth-value denoting node is reached, at which point negation is cashed out in the semantic composition. These analyses interpret *few* and *no* as semantically complex. In this talk, I claim that a parallel analysis of *few* and *no* is not warranted. Rather, differences between *few* and *no* support more recent analyses of *few* as a semantically simplex degree quantifier, while a Klima-type analysis is essentially correct for *no*.

Klima notes that the elided material in (1) requires an antecendent that lacks negation, since negation is expressed overtly in the second conjunct as *neither*. This supports an analysis that removes the negative component of *no* from the antecedent VP at LF. Klima claims the sentence in (2) shows similarly that *few* consists of *not many*.

(1) I will force you to marry no one, and neither will he ~~force you to marry anyone~~.
(2) Few writers accept suggestions, and neither do many publishers ~~accept suggestions~~.

But in (2), the elided phrase does not contain *many*, so it does not necessitate splitting *few* into *not many* in the antecedent. It merely shows that *few* can be paraphrased as *not many*. If we consider cases with *few* that are fully parallel to (1), the results are quite marginal:

(3) ??I will force you to read few books for this class, and neither will Prof. Jones ~~force you to read many books for this class~~.

The contrast between (1) and (3) suggests that *no* and *few* are not semantically uniform. This conclusion is reinforced by the fact that unlike other negative words, *few* does not participate in negative concord, as the Italian examples in (4) (from Ladusaw 1992) and (5) show.

(4) Mario *(non) ha parlato di niente con nessuno.
Mario *(not) has spoken about nothing with no one
'Mario has not spoken to anyone about anything.'
(5) Fortunatamente, questo farmaco (*non) ha pochi effetti collaterali.
Fortunately, this medication (*not) has few effects collateral
'Fortunately, this medication has few side effects.'

These observations lend support to alternative analyses of *few* that cast it as a degree quantifier that combines with a degree predicate and derives the set of degrees for which the degree predicate is false: $\lambda D_{<d,t>}\lambda d_d$. $\neg D(d)$ (Heim 2006, Büring 2007, Solt 2015), which does not require licensing by negation (5). This gives (3) the LF in (6), where the degree variable is unbound in the elided verb phrase, leading to its infelicity.

(6) [few [λ*d* I will force you to read *d* books]] and [neither will Prof. Jones ~~force you to read *d* books~~]

These observations are also problematic for theories that seek to connect *no* and *few* in the other direction, such as Alrenga and Kennedy (2014). They suggest that *no* in examples like (1) is a degree quantifier that combines with a degree predicate and says the degree predicate holds of no degree, so that the first clause in (1) says there is no number such that I will force you to marry that number of people. However, the data in (1)-(5) indicate that *no* patterns like sentential negation *not,* which combines with a truth-value denoting expression, not a degree predicate. Consequently, while both *few* and *no* may have wide scope with respect to a verb like *force* and other modal operators, such 'split scope' readings arise by a different mechanism in the case of *no* (reflecting a covert higher negation as per McNally and others) than in the case of *few* (degree quantifier raising as per Heim and others).

Keywords: few; no; split scope; degree quantification; negative concord

References

Alrenga, Peter and Christopher Kennedy. 2014. "*No more* shall we part." *Natural Language Semantics* 22: 1-53.

Büring, Daniel. 2007. "Cross-polar nomalies." In *Proceedings of SALT 17* edited by Tova Friedman and Masayuki Gibson, 37-52. Washington, DC: Linguistic Society of America.

Heim, Irene. 2006. "Little." In *Proceedings of SALT 16*, edited by Masayuki Gibson and Johnathan Howell, 35-58. Washington, DC: Linguistic Society of America.

Klima, Edward. 1964. "Negation in English." In *The structure of language: Readings in the philosophy of language*, edited by Jerry Fodor and Jerrold Katz, 246-323. Hoboken: Prentice Hall.

Ladusaw, Bill. 1992. "Expressing negation." In *Proceedings of SALT 2*, edited by Chris Barker and David Dowty, 237-260. Washington, DC: Linguistic Society of America.

McNally, Louise. 1998. "Existential sentences without existential quantification." *Linguistics and Philosophy* 21: 353-392.

Solt, Stephanie. 2006. "Monotonicity, closure and the semantics of *few*." In *Proceedings of WCCFL 25*, edited by Donald Baumer, David Montero and Michael Scanlon, 380-389. Somerville, MA: Cascadilla Press.

Solt, Stephanie. 2015. "Q-adjectives and the semantics of quantity." *Journal of Semantics* 32:221-273.

Polish speakers' acquisition of German Front Rounded Vowel, ü

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Second language acquisition requires learners to acquire novel articulatory routines. This process can be confounded when L1 segments share acoustic-perceptual similarities to the target L2 segments. The results can be difficulty distinguishing L1 and L2 segments and delayed or even blocked acquisition (Best & Tyler, 2007; Flege & Bohn, 2021). The purpose of this project is to understand how L2 segment acquisition occurs. To this end, I examined the acquisition of the front rounded vowel, ü in German by L1 Polish speakers.

Nineteen L1 Polish speakers learning German (7 A-level, 8 B-level, and 4 C-level) participated in this study. Participants read sentences in German that contained minimal pairs for u and ü. Data was recorded with the Micro system from Articulate Assistant Advanced. Tongue contours were traced automatically using the DeepLabCut for Speech (Wrench & Balch-Tomes, 2022). Contours were extracted at the midpoint in cartesian x- and y-coordinates. A Generalized Additive Mixed Models was then calculated in R (R Core Team, 2020) to identify differences between target segments and proficiency levels. A smoothing term was included for each of, Segment (2 levels: u & ü), Level (3 levels: A, B, & C), and the interaction between Segment and Level. A factor smooth was included for adjacent segments (3 levels: fVr, mVs, wVr) and Participant (19 levels).

The results revealed a significant effect for ü ($p < 0.001$), but not for u ($p = 0.995$), indicating that u did not differ significantly from the smoothing term s(X), but that ü was significantly different from both s(X) and u. There was also a significant difference for Level C ($p = 0.021$), but not Levels A or B ($p > 0.05$). Finally, there was an interaction between Level B and u ($p < 0.001$) and Level C and ü ($p < 0.001$), but no other interactions ($p > 0.05$). Figure 1 presents the GAMM contours for each Segment for each Level. The estimated differences between smooths (Figure 2) revealed differences for each group. For Level A, the most posterior portion of the tongue was more advanced for ü, but that difference rapidly deteriorated. The anterior tongue body/blade for ü was more raised than u. Level B showed a similar trend for ü, except that the advancement of the tongue dorsum persisted for a larger area of the tongue than in Level A. Level C revealed a more advanced tongue for ü than either levels that also persisted for larger portions of the posterior tongue and more raised anterior tongue body/blade, when compared to u.

The data suggests that partial assimilation of ü with L1 u takes place during the acquisition process. However, it also indicates both rapid and slow acquisition of novel segments. Level A participants made use of motor patterns similar to u during acquisition, but distinctions were evident in phonetically important details (i.e., tongue dorsum advancement for ü). However, it was not until Level C that appropriate fronting of the tongue dorsum and body occur to contrast the front rounded ü with u. This suggests the process of novel segment acquisition has a rapid onset but takes longer time for complete learning of important phonological contrasts to occur.

Figures

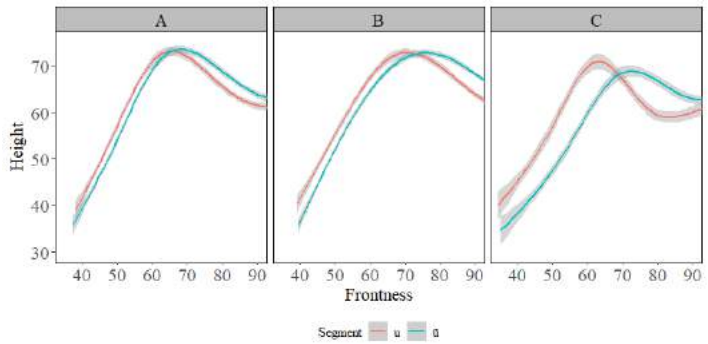

Figure 1. GAMM contours for u and ü as produced by Levels A (left), B (middle), and C (right). Tongue Tip is on the right.

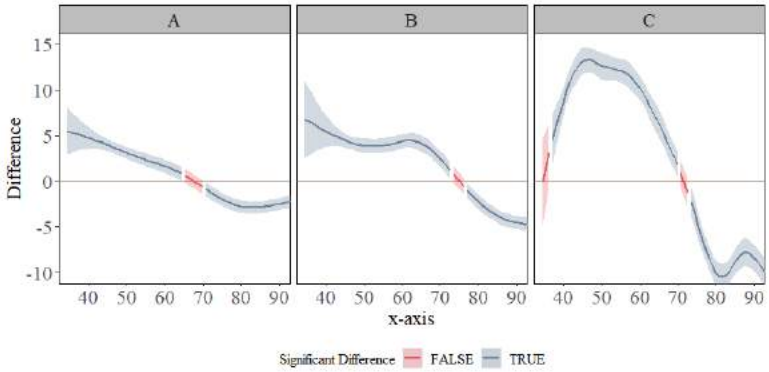

Figure 2. Difference in the contour for u and ü for Levels A (left), B (middle), and C (right). Tongue tip is on the right.

Table 1. Approximate Significance of Smooth Terms (Adjusted $R^2 = 0.79$)

	edf	ref df	F	p-value
s(x)	7.95	8.47	19.23	< 0.01
s(x): /u/	0.00	0.00	0.09	0.99
s(x): /ü/	4.91	5.92	35.21	< 0.01
s(x): A-Level	1.42	1.61	1.54	0.37
s(x): B-Level	1.00	1.00	0.00	0.97
s(x): C-Level	1.00	1.00	5.35	0.02
s(x): /u/: A-Level	0.00	0.00	0.15	0.99
s(x): /u/: B-Level	4.43	5.48	7.56	< 0.01
s(x): /u/: C-Level	1.00	1.00	0.14	0.71
s(x): /ü/: A-Level	0.00	0.00	0.36	0.99
s(x): /ü/: B-Level	1.00	1.00	0.84	0.36
s(x): /ü/: C-Level	7.61	8.49	14.43	< 0.01

References

Best, C. T., & Tyler, M. D. (2007). Nonnative and second-language speech perception: Commonalities and complementarities. In Munro, M. J. & Bohn, O. S., (eds.), *Language Experience in Second Language Speech Learning: In Honor of James Emil Flege*, pp. 13-34. Amsterdam: John Benjamins.

Flege, J. E. & Bohn, O.S. (2021). The revised speech learning model (SLM-r). In Wayland, R. (ed.), *Second Language Speech Learning: Theoretical and Empirical Progress*, pp. 3-83. Cambridge University Press.

R Core Team (2020). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing, Vienna, Austria.

Wrench, A. & Balch-Tomes, J. (2022). Beyond the edge: markerless pose estimation of speech articulators from ultrasound and camera images using DeepLabCut. *Sensors*, 1133.

Forms, Functions and Developments of Demonstratives in Kavalan and Paiwan

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This study sets out to investigate the semantics, syntatx and grammaticalization of demonstratives in two Formosan languages, Kavalan and Paiwan. Semantically, Paiwan demonstratives, like the English counterparts, are deictically contrastive, while the Kavalan demonstrative system is tripartite, as in Tables 1 and 2. Syntactically, demonstratives in the languages can serve not only as pronouns, determiners, and adverbs, but also as verbs, which is typologically rare.

Table 1 Demonstratives in Paiwan

Reference	**Case**	**Proximate (Near S)**	**Distal (Away from S)**	**Syntactic Category**
Entity (Human & Nonhuman)	Nom	a icu /aicu	a zua/azua	Pronoun Determiner
	Obl	ta icu	tua zua/tuazua	
Location		imaza	izua	Pronoun Adverb
Manner		mayatucu (maitucu)	mayatazua (maitazua)	Adverb Verb

Table 2 Demonstratives in Kavalan

Reference	**Proximate (Near S)**	**Medial (near L, away from S)**	**Distal (away from both L & S)**	**Syntactic Category**
Entity (Human & Nonhuman)	zau	'nay/unay/yau	wiu	Pronoun Determiner
Location	tazian	taian	tawian	Adverb
Manner	nazau	nayau		Adverb Verb

Moreover, cross-linguistic studies show that demonstratives provide a frequent source for grammatical markers: definite articles, relative and third person pronouns, nonverbal copulas, sentence connectives, directional preverbs, focus markers, expletives, and so on (Diessel 1999, 2006). Distal demonstratives in these two Formosan languages are also found to undergo grammaticalization, but in different pathways from each other as well as from what have been reported in most Indo-European languages. The distal pronominal demonstratives, Paiwan *zua* and Kavalan *yau*, developed from deictic terms indicating entities, spatial, temporal and psychological distances, to existential verb, to third person pronouns, and then to aspectual markers. What is more intriguing is that the development of the Paiwan manner deictic terms, *mayatucu* and *mayatazua*, is closely related to grammaticalization of the Paiwan SAY verb *aya*, which is intrinsically of both saying and deictic readings, as in (1) (cf. Hsieh 2016, 2022).

(1) Paiwan (*One Hundren Paiwan Texts, OHPT*)

a. "avan ku=sika rekutj a pu-valaw," **aya**
exact 1SG.GEN=reason fear NOM have-spouse AF.say
zua tsad.
that bandit
'"That's why I'm afraid of marrying," said the bandit.' (*OHPT* 011-082)

b. “aku **ma-aya**=sun?” **aya-in** nua mamazangiłan.
why AV-be.thus=2SG.NOM say-PV GEN chieftain
‘“Why are you like that?” asked the chieftain.’ (*OHPT* 038-008)

c. “aku su=**aya-in** a ku=alak?”
why 2SG.GEN=do.thus-PV NOM 1SG.GEN=child
‘“Why did you do that to my children?”’ (*OHPT* 018-011)

This finding may echo back to Frajzyngier’s (1987, 1996:146) findings that the demonstrative in Mupun and several other Chadic languages developed from motion verbs and verbs of saying.

The results of this study may contribute theoretically to a better understanding of the forms, functions and developments of demonstratives in Kavalan and Paiwan, and may also shed some lights on the typological studies of demonstratives.

Keywords: demonstratives, Formosan languages, grammaticalization, deictic terms, SAY verb

References

Diessel, Holger. 1999. *Demonstratives: Form, Function, and Grammaticalization*. John Benjamins.

Diessel, Holger. 2006. “Demonstratives, joint attention, and the emergence of grammar. ” *Cognitive Linguistics* 17(4):463–489.

Early, Robert, and John Whitehorn. 2003. *One Hundred Paiwan Texts*. Canberra: Research School of Pacific and Asian Studies, The Australian National University.

Frajzyngier, Z. 1987. “From Verb to Anaphora.” *Lingua* 72:155-168.

Frajzyngier, Z. 1996. “On Sources of Demonstratives and Anaphors.” In *Studies in Anaphora*, edited by Barbara Fox, 169-203. Amsterdam: John Benjamins.

Hsieh, Fuhui. 2016. “On the Development of the Lexeme *aya* in Paiwan. ” *Oceanic Linguistics* 55(1):225-245.

Hsieh, Fuhui. 2022. “On the Semantics of SAY verbs in Formosan Languages. ” *Journal of Taiwanese Languages and Literature* 17(1):47-92. (in Chinese)

Appendix

1. Voice system in Paiwan

Voice	Indicative forms	Non-indicative forms (imperative & negation)
Agent Voice	ma-; ø; ; m-; <en>	∅
Patient Voice	<in> ; in-; -in; -en	-i
Locative Voice	-an	-an
Referential/Instrumental/Beneficiary Voice	si-	-an

2. Voice System in Kavalan

Voice	Indicative/non-indicative forms
Agent Voice	ma-; ø; ; m-; <en>
Patient Voice	-an

Deixis in Abui

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Demonstratives (pronominal, adnominal, and verbal) in Abui, a Papuan language of Indonesia, are organised in a symmetrical three-way system. Speaker and addressee viewpoint are distinguished, attending to the knowledge imbalance among interlocutors (shared, asymmetrical, no shared knowledge).

Abui demonstratives have been described as markers of a number of grammatical categories, (e.g. deictics, articles, subordinators, tense, evidentiality, and stance markers) and linked to associated syntactic positions within the Abui sentence (Kratochvíl 2011; Kratochvíl and Delpada 2015). Such analysis was based on the assumption that the spatial use is primary and underlies conceptual metaphors mapping abstract categories such as tense or evidence (e.g. SPACE IS TIME, SPACE IS KNOWLEDGE). This may well be a deception that the demonstratives have played with linguistic theory for many decades.

Demonstratives may be embedded speech acts that simply call for attention to a particular referent, positioning it from either the speaker's or addressee's perspective. Such a view of demonstratives entails that demonstratives are semantically hollow signs (except the distance and viewpoint) that trigger a search for the referent in a variety of domains (modes of access) whose choice is restricted by the context (ephemeral and perduring). The search vector is directed by the context (there are more and less probable search resolutions).

In this paper we approach the Abui demonstratives as devices that manage joint attention, shared knowledge and their chief purpose is the resetting and updating thereof (cf. Hanks 1992; Tomasello et al. 2007; Evans et al. 2018). We focus on the marking expression of shared knowledge in natural discourse, exploring the division of labor between speaker- and addressee-oriented forms and the work of demonstratives as regulators of attention. We examine various speech acts in natural discourse where the degree of shared knowledge differs (conversations among friends, interview with healers, performing experimental tasks). We compare the behavior of demonstratives in directives, explanations, invitations, and question-answer pairs to detect their consequences down the line (agreement, repetition, alternation, shift) and highlight the cases of renegotiating the reference, as exemplified in (1) below.

The fragment is taken from an interview with a healer who tells the interviewer about various cases she treated. The fragment identifies the patient to whom the healer refers by her first name and assumes that the patient's identity is readily available to the interviewer. Because this is not the case, the reference is negotiated until both participants update their knowledge and converge on a shared referential expression. The healer uses deictic elevational *wó* (DIST.HIGH), proximal *do* (PROX), as well as pronouns. The interviewer

prompts elaboration with an incomplete relative construction, until the reference is resolved and both agree.

Abui (healer identifying one of her patients; Alowai.AA.844-849)

(1) AA: *eh* ***o*** ***do,*** ***wó*** *e-ya* ***do,*** ***do*** *Kol Sara* ***do***
oh MD PROX DIST.H 2SG.AL-mother PROX PROX proper.name PROX

baai nedo mara hoo-dawen-i
also 1SG.FOC go.up.IPFV 3.GOAL-cure.PFV-PFV
'oh, this one, up there, your aunt, this Kol Sara here, even her I treated'

AA: ***hedo*** ***di*** *parenta* *ba* *mara* *wala* ***do*** *baai beeka* *ba*
3.FOC 3.AGT paved.road TOP go.up.IPFV part PROX also cannot QUOT
'she said that she could not even walk up the road (to her house)'

BD: *Kol Sara* *ba?*
proper.name REL
'which Kol Sara?'

AA: ***wó*** *e-ya* ***nu***
DIST.H 2SG.AL-mother SPC
'an aunt of yours up there'

BD: *Len* *he-ya* *nu*
proper.name 3.AL-mother SPC
'that's Len's mum'

AA: *Len* *he-ya* *hoo?*
proper.name 3.AL-mother TAG
'Len's mum, is she?'

Keywords: demonstratives; discourse; engagement; attention management; Papuan

References

Evans, Nicholas, Henrik Bergqvist, and Lila San Roque. 2018. "The Grammar of Engagement I: Framework and initial exemplification." *Language and Cognition* 21: 1– 31.

Hanks, William. 1992. "The indexical ground of deictic reference." In *Rethinking context: language as an interactive phenomenon*, edited by Alessandro Duranti and Charles Goodwin, 43–76. Cambridge: Cambridge University Press.

Kratochvíl, František. 2011. "Discourse-structuring functions of Abui demonstratives." In *Nominalization in Asian languages. Diachronic and typological perspectives*, edited by Foong Ha Yap, Karen Grunow-Hårsta, and Janick Wrona, 757–788. Amsterdam: John Benjamins.

Kratochvíl, František, and Benidiktus Delpada. 2015. Definiteness and Specificity in Abui. In *Proceedings of the Second International Workshop on Information Structure of Austronesian Languages*, 179–208. Tokyo: Research Institute for Languages and Cultures of Asia and Africa Tokyo University of Foreign Studies.

Tomasello, Michael, Malinda Carpenter, and Ulf Liszkowski. 2007. "A new look at infant pointing." *Child Development* 78 (3): 705 –722.

Laughter in conversation: interrelation between breathing pattern, acoustic realization and its function

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Laughter is one of the most common nonverbal vocalizations; its acoustic features reveal great variety regarding the individual differences or the function of the laughter as well. However, there are some physiological limits to both breathing and speech production that have to be considered. During laughing, the chest wall is stressed, thus it moves notably and rapidly (Yanagisawa et al. 1996). Previous studies have found that during laughter, exhalation can be rapid and exhaustive, as well as lung volume can drop to an absolute minimum (Filippelli et al. 2001, Offrede et al. 2021).

There are many types of laughter, which differ according to the aspect from which the phenomenon is analyzed: their form, acoustics, social-pragmatic function, number of speakers, etc. The present study examines the relationship between laughter and respiration in the framework of the laughter's form and function in the conversations.

The aim of the present study is to analyze the pattern of laughter by the application of non-invasive Respiratory Inductance Plethysmography during laughter in two-person conversations.

The audio material – consisting of 5 task-oriented conversations – was recorded in a studio using head-microphones. The speakers were asked to talk about their summer holiday; the material is 20 minutes long. Two female speakers participated in each recording, all of them are Hungarian monolingual speakers aged between 18 and 24 years; the members of pairs already knew each other well before the recording. The respiratory patterns of the speakers during laughter were analyzed using Respiratory Inductance Plethysmography for the first time in Hungarian. The sound samples were annotated on inter-pausal unit level in Praat software (Boersma–Weenink 2022), while the laughter was labeled in separate tiers.

We present the instrumental recording and analysis methodology, the frequency and types of laughter, whether they occurred 1) as backchannel responses by the listener, 2) as the speaker's own laughter while speaking ("speech-laughs") or after speaking , 3) as joint laughter by the two participants ("overlapping laughter"). The duration and amplitude of inhalations immediately preceding the laughter, also the given exhalations were analyzed as well as the duration and intensity of the laughter. Furthermore, the correlation between the laughter's duration and the amplitude of the inhalation was analyzed as well as the correlation between laughter's intensity and the amplitude of the inhalation.

Preliminary results showed that in most cases exhalations during laughter were realized with greater slope (compared to exhalation during speech or tidal breathing). Exhalation realized with remarkable dynamic compression of the airways, irrespectively of the laughter type, nearly half of the cases the minimum value of the inhalation cycle was lower during

laughter than during speech (as in previous results, cf. Filippelli et al. 2001). However, results showed notable individual differences.

The results provide new insights into the physiological background of speech production and the synchronicity of speech and respiratory planning. Although empirical measurement of respiration provides an opportunity to objectively examine respiratory patterns, the results are limited by the relatively small number of data, which reduces the range of conclusions that can be drawn.

Keywords: breathing; laughter; task-oriented speech; backchannel response; Respiratory Inductance Plethysmography

References

Boersma, Paul, and David Weenink 2022. Praat: doing phonetics by computer. http://www.fon.hum.uva.nl/praat/ download_win.html.

Filippelli, Mario, Riccardo Pellegrino, Iacopo Iandelli, Gianni Misuri, Joseph R. Rodarte, Roberto Duranti, Vito Brusasco, and Giorgo Scano. 2001. "Respiratory dynamics during laughter. " *Journal of Applied Physiology* 90 (4): 1441–1446.

Offrede, Tom, Susanne Fuchs, and Christine Mooshammer. 2021. "Multi-speaker experimental designs: Methodological considerations." *Language & Linguistics Compass* 15 (12): e12443. https://doi.org/10.1111/lnc3.12443

Yanagisawa, Eiji, Martin J. Citardi, and J. O. Estill 1996. "Videoendoscopic analysis of laryngeal function during laughter." *Annals of Otology, Rhinology & Laryngology* 105 (7): 545–549.

Assertions vs. Declarations, and Informative vs. Performative Updates

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Declarative sentences can be understood in at least two ways: As **assertions** of propositions that are supposed to *be* true, and as **declarations** that *make* them true. Assertions have received much more attention in syntax, semantics and also in pragmatics; the discussion of declarations is largely confined to speech-act theory. I will make a comprehensive proposal for syntax, semantics and pragmatics that encompasses them both in a novel way.

Syntax: Recent work has revived the assumption of a performative layer in assertions above the TP for operators that express evidential, epistemic and evaluative meanings or indicate the strength of assertion and the relation between speaker and addressee, cf. Wiltschko (2021). For example, Miyagawa (2022), Miyagawa & Hill (2023) assume a "commitment phrase", and Frey (2020) and Krifka (2021) also a "judgement phrase":.

(1) Assertion: $[_{\text{ActP}}$ • $[_{\text{ComP}}$ C $[_{\text{JudgeP}}$ J $[_{\text{TP}}$ the borders are closed]]]],
The borders are apparently / certainly / unfortunately / actually / really closed.
The borders are closed, I'd say. / I think. / The borders might be closed.

I argue that declarations do not have these layers except the ActPhrase layer. This includes explicit performatives, which I treat as subcase of declarations (cf. Searle 1989), not as a subcase of assertions (as Bach & Harnish 1979, Condoravdi & Lauer 2011).

(2) Declaration: a. $[_{\text{ActP}}$ • $[_{\text{TP}}$ *the borders are (hereby) closed*]]]
b. $[_{\text{ActP}}$ • $[_{\text{TP}}$ *I (hereby) declare that the borders are closed*]]

Semantics: I propose a semantic framework in which sentences lead to an incremental change of the Common Ground, specified as a context set c of world-time indices i (cf. Stalnaker 1978). But in addition to the **informative** update with a proposition φ, which restricts c by taking out indices for which φ is not true, I also assume a **performative** update that changes the indices of c so that φ becomes true. I discuss theories for index change (Szabolcsi 1982, Krifka 2014) and propose improvements within a branching-time framework: An index i′ is a minimal change from i that makes φ true iff i and i′ have the same predecessors, and φ is true in i′ but not in i and there are no other changes. This change does not take time and allows for cotemporaneous additional changes.

I will give a compositional interpretation where the ActP operator • induces a performative update of c with its complement proposition so that for all indices in c, φ becomes true. This explains how declarations work: Assuming that authority conditions are satisfied, the speaker "makes" the propositions true in the common ground, which is possible for certain social acts: Saying so makes it so. For assertions, I follow Krifka (2015) and assume that they consist in a performative update with the commitment or guarantee of the speaker for a proposition; this backs up the subsequent informative update of c with that proposition.

Pragmatics: I will also propose an analysis of the **locutionary** act within Common Ground update. Performing a speech act with the linguistic form α at c consists in a realization of that form at c (leading to changes of the indices of c), composed with an interpretation of α, the illocutionary act. I will give a novel interpretation of *hereby*, which I argue refers to the event of the locutionary act and relates it causally to the proposition of the illocutionary act. In

contrast to Eckardt (2012), this also explains the occurrence of *hereby* outside explicit performatives, as in (2).

Keywords: Speech acts, performatives, assertions, declarations

References

Bach, Kent & Robert M. Harnish. 1979. *Linguistic communication and speech acts.* Cambridge, MA: MIT Press.

Condoravdi, Cleo & Sven Lauer. 2011. Performative verbs and performative acts*. Sinn und Bedeutung* 15. Saarbrücken: Saarland University Press, 1-15.

Eckardt, Regine. 2012. *Hereby* explained: An event-based account of performative utterances. *Linguistics and Philosophy* 35: 21-55.

Frey, Werner. 2020. German concessives as TPs, JPs and ActPs. *Glossa: a journal of general linguistics* 5*.*

Krifka, Manfred. 2014. Embedding illocutionary acts. In: Roeper, Tom & Margaret Speas, (eds), *Recursion. Complexity in cognition*. Springer, 125-155.

Krifka, Manfred. 2015. Bias in Commitment Space Semantics: Declarative questions, negated questions, and question tags*. SALT* 25. 328-345.

Krifka, Manfred. 2023. Layers of assertive clauses: Propositions, judgments, commitments, acts. In: Hartmann, Julia & Angelika Wöllstein, (eds), *Propositionale Argumente im Sprachvergleich: Theorie und Empirie*. Tübingen: Gunter Narr. Prefinal version on *lingbuzz.*

Miyagawa, Shigeru & Virginia Hill. 2023. Commitment phrase: Linking proposition to illocutionary force. *Linguistic Inquiry.*

Miyagawa, Shigeru. 2022. *Syntax in the treetops.* Cambridge, Mass.: MIT Press.

Searle, John R. 1989. How performatives work. *Linguistics and Philosophy* 12: 535-558.

Stalnaker, Robert. 1978. Assertion. In: Cole, Peter, (ed), *Pragmatics*. New York: Academic Press, 315-323.

Szabolcsi, Anna. 1982. Model theoretic semantics of performatives. In: Kiefer, Ferenc, (ed), *Hungarian linguistics*. Amsterdam: John Benjamins, 515-535.

Wiltschko, Martina. 2021. *The grammar of interactional language.* Cambridge: Cambridge University Press.

Northern Khanty Resultative: actional properties and stativizing

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Northern Khanty (Uralic>Khantic) resultative construction is used to express a state which arises as the result of an action described by the lexical verb base:

(1) iśn-en pʉš-man wə-λ[1] <ES P, P>[2]
window-POSS.2SG open-CVB be-NPST[3SG]
'The window is open' [there happened an action of window opening]

The resultative is restricted to telic verbs, which distinguishes it from labeling it as perfect gram category[3] (Comrie 1976, Dahl 1985, Nedjalkov 1988). In my talk, I will present the interaction between the resultative and the actionality of the lexical verb and discuss implications of these data for analyses proposed within Neo-Davidsonian event semantics (Maienborn 2011).

Unlike English deverbal adjectives (Koontz-Garboden 2010), Northern Khanty resultative is not restricted to degree verbs. Moreover, it is acceptable with momentative morphology, which signifies that the event happened fast.

(2) jiŋk-en kawər-əmə-man wə-λ
water-POSS.2SG boil-MOM-CVB be-NPST[3SG]
'The water has been boiled'

Actional constraints on the resultative provide a new perspective on the compositional analysis of resultatives. The closest analysis known in the literature is the stativizer proposed for German adjectival passives (Kratzer 2005, Maienborn 2009). The main feature distinguishing existing theoretical views is the nature of the state introduced by the stativizer. According to Kratzer, the German adjectival passive can denote a target state or a resultant state: the former is in principle reversible, while the latter holds forever after (Kratzer 2005: 385). (Maienborn 2009) proposes a monosemous analysis of the stativizer, whereby the state introduced is always pragmatic in nature.

The Northern Khanty resultative only derives reversible states. Examples (3) and (4) show a reversibility constraint: if a speaker knows the state to be reversible, they accept the resultative form while knowing about the state being irreversible yields unacceptability.

(3) išn-en šukat-man wə-λ
window-POSS.2SG break-CVB be-NPST[3SG]
'The window is broken' {It will be replaced with a new one tomorrow}

[1] The results of the project "Constituent structure and interpretation in the grammatical architecture of the languages of Russia", carried out within the framework of the Basic Research Program at the National Research University Higher School of Economics (HSE University) in 2023, are presented in this work.

[2] I use the actional classification proposed in (Tatevosov 2002, Tatevosov 2016) In this classification, each verb has two sets of interpretations: interpretations available under perfective viewpoint aspect and interpretations available under imperfective viewpoint aspect (<PFV, IPFV>). The set of possible interpretations is {S, P, ES, EP, MP}, with ES and EP interpretations unavailable in the imperfective.

[3] Crosslinguistically, perfects are not restricted to telic verbs (Nedjalkov 1988: 15)

(4) ʔan-ew šukat-man wɵ-λ
cup-POSS.1PL break-CVB be-NPST[3SG]
exp. ‘Our cup is broken’ {We won’t have another one like that anymore}

The Northern Khanty resultative cannot denote a resultant state in Kratzer’s sense as that would violate the irreversibility condition. This speaks in favor of a monosemous target state analysis for the resultative. However, as far as we see a contrast based on speaker knowledge, it gives more plausibility to a pragmatically filled state analysis (Maienborn 2009). Another point for pragmatic state analysis is that target state, which is meant to be lexically specified, cannot be predicted by actional characteristics of the predicate. Since S and ES interpretations are non-obligatory, the state described by the resultative is not determined by actionality. Moreover, the state must be perceivable: state introduced in (5), that is the state of word being said, has not enough perceivable properties, which leads to the unacceptability of (5). In the talk, I will elaborate on possible contradictions to the perceivability constraint.

(5) *jăsəŋ lup-man wɵ-λ
word say-CVB be-NPST[3SG]
exp. ‘Word has been said.’

I will also discuss possible account in terms of degrees, as proposed in (Koontz-Garboden 2010).

Glosses: 1, 2, 3 – person, MOM – momentative, POSS – possessive, SG – singular, PL – plural, CVB – converb, NPST – non-past tense

Keywords: actionality, grammatical aspect, resultative, reversibility, stativizer

References

Comrie, Bernard. 1976. “Aspect: An introduction to the study of verbal aspect and related problems.” Cambridge: Cambridge University Press.

Dahl, Östen. “Tense and Aspect Systems.” Oxford: Blackwell, 1985.

Koontz-Garboden, Andrew. 2010. “The lexical semantics of derived statives.” Linguist and Philos 33, 285–324.

Kratzer, Angelika. 2005. “Building Statives.” Proceedings of the Twenty-Sixth Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on Aspect (2000).

Maienborn, Claudia. 2009. “Building event-based ad hoc properties: on the interpretation of adjectival passives.” A. Riester & T. Solstad (eds.), Proceedings of Sinn und Bedeutung 13. 35–49. University of Stuttgart. Stuttgart.

Maienborn, Claudia. 2011. “Event semantics.” Semantics. An International Handbook of Natural Language Meaning 1, 802-829.

Nedjalkov, Vladimir Petrovich. 1988. “Typology of Resultative Constructions.” John Benjamins Publishing Company. Amsterdam/Philadelphia.

Tatevosov, Sergey Georgievich. 2002. “The parameter of actionality.” Linguistic Typology 6(3):317-401,

Tatevosov, Sergey Georgievich. 2016. “Glagol classes and typology of actionality.” Moscow: Yazyki slavyanskoi kultury.

The Features and Fission of Diminutives and Augmentatives in Czech

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This paper presents an analysis of Czech diminutives and augmentatives in the Minimalist (Chomsky 1995, et seq.) non-lexicalist late-insertion framework of Distributed Morphology (Halle and Marantz 1993, Embick and Noyer 2007). It is argued here that diminutive and augmentative morphemes are comprised of a feature bundle [±AUG, ±DIM], that this feature bundle can include a category-defining feature, and that these morphemes can be split by a Fission rule prior to Vocabulary Insertion. This approach accounts for the seemingly "polyfunctional" (diminutive, augmentative, as well as nominalizing) property of the /k/ exponent found in Czech diminutives and augmentatives and is motivated by the systematic similarity in the form of both Czech diminutives and augmentatives, as well as their morphosyntactic behaviour.

It is here argued against Fábregas's (2013) claim that the distinction between Czech and German diminutives is as straightforward as the former appearing in specifier positions of category-defining heads and the latter being a category-defining head that projects. Fábregas (2013: 19) supports this claim by the observation that Czech diminutives have the following properties: (i) they do not change the category of the base, (ii) they do not change the grammatical gender of the base, and (iii) they do not turn a count noun into a mass noun or vice versa, and contrasts these to the properties of German diminutives. While this is true for some Czech diminutives, such as (1), the diminutives in (2–4), formed by otherwise regular and productive processes, have properties which are the exact opposite of those stated in (i–iii), and behave similarly to German diminutives as described by Fábregas (2013). The diminutive in (2) changes the verbal base into a noun, in contrary to (i), the diminutive in (3) changes a neuter noun into a feminine noun, in contrary to (ii), and the diminutive in (4) turns a mass noun into a count noun, in contrary to (iii).

(1) chlap-eč-k-a
boy-DIM-DIM-SG.GEN
"a little boy"

(2) strouh-a-t, strouh-a-nk-a
grate-*v*-INF grate-*v*-DIM-SG.NOM
"to grate, breadcrumbs"

(3) Vánoc-e, vánoč-k-a
Christmas-SG.NOM Christmas-DIM-SG.NOM
"Christmas, vánočka (sweet plaited bread)"

(4) prach-u, práš-k-u
dust-SG.GEN dust-dim-SG.GEN
"dust, powder/pill"

The second part of this paper deals with how phonological exponents are inserted into diminutive and augmentative morphemes. Based on the distribution of these exponents, it is argued that some Czech diminutives and augmentatives must appear with two consecutive diminutive/augmentative exponents. An explanation as to why this is the case is offered by introducing a Fission rule (Noyer 1992; Halle and Marantz 1993, Section 2.1; Halle 1997, Section 3) in Czech (5), which post-syntactically splits a single morpheme with the feature bundle [±AUG, ±DIM] in two prior to Vocabulary Insertion.

(5) [±AUG, ±DIM] ⟶ [±AUG] + [±DIM]

An underspecified Vocabulary Item (VI) which refers only to the unvalued [±DIM] feature is then due to the Subset Principle of Halle (1997) able to provide the phonological exponent /k/ to both diminutives and augmentatives, while two separate VIs referring to the specific value of the [±AUG] feature limit the distribution of the second required exponent. Consistency with the observation that diminutives of the type in (2–4) carry a category-defining feature is in this approach maintained, as there is nothing blocking the insertion of the /k/ exponent in such environments.

Keywords: Distributed Morphology, Czech, Diminutives, Augmentatives, Fission

References

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Massachusetts: The MIT Press.

Halle, Morris. 1997. "Distributed Morphology: Impoverishment and Fission." *MIT Working Papers in Linguistics* 30: 425–449.

Halle, Morris, and Alec Marantz. 1993. "Distributed Morphology and the Pieces of Inflection." In *The View from Building 20*, edited by Kenneth Hale and Samuel Jay Keyser, 111–176. Cambridge, Massachusetts: The MIT Press.

Embick, David, and Rolf Noyer. 2007. "Distributed Morphology and the Syntax-Morphology Interface." In *The Oxford Handbook of Linguistic Interfaces*, edited by Gillian Ramchand, 289–324. Oxford: Oxford University Press.

Fábregas, Antonio. 2013. "Diminutives as heads or specifiers: the mapping between syntax and phonology." *An International Journal of Theoretical Linguistics* 5 (1): 1–44.

Noyer, Rolf. 1992. "Features, positions and affixes in autonomous Morphological Structure." PhD. diss, Massachusetts Institute of Technology.

Iconicity in the production of temporal adverbial clauses: an artificial language learning experiment

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Temporal iconicity is a type of grammatical iconicity characterized by a diagrammatic mapping between the order of events in reality and discourse (Haspelmath 2008). Thus, *The cat meowed and jumped* presupposes that the meowing happened first. This iconic ordering can be overridden by the use of constructions that encode the temporal relation between events, such as temporal adverbial clauses (*Before the cat jumped he meowed*). Interestingly, corpus studies have demonstrated that even such constructions tend to be placed in an iconic fashion (*After A, B* and *A, before B*) (Diessel 2008; Rezaee and Golparvar 2016). This tendency is in line with the functionalist view of iconicity as a major mechanism influencing language structure. For instance, Ramat (1995) has argued that iconic structures would be preferred in situations such as language acquisition because their transparency lowers cognitive load. In the context of temporal iconicity, de Ruiter and colleagues (2018) have shown that five year-olds comprehend temporal adverbial clauses with before and after better when the clause order is iconic.

The present paper extends the study of temporal iconicity to language learning, using the mixture shift paradigm of artificial language learning (Culbertson, Smolensky, and Legendre 2013). A miniature language was created to test whether participants will prefer structures with iconic order. During exposure, participants saw pictures paired with sentences with temporal adverbial clauses with after or before. 12 unique combinations of events were presented in four configurations of clause order and connective. Participants were thus exposed to an equal number of clause order and connective combinations. In the test phase, participants saw 12 new event combinations. Lexical words as well as the connective were provided in a random order and participants were asked to create sentences correctly describing the pictures (Figure 1).

I collected responses from 140 speakers of Czech or other Slavic languages. Responses were coded as well-formed if the events were in the correct order and the correct connective was used. Only data from participants with nine or more well-formed responses was analyzed (98 participants, 1042 responses). The results show two clear patterns in terms of the strategy used in sentence production. First, a number of participants relied on syntactic factors such that they applied the same clause order in all or most of the responses. Conversely, a smaller but substantial group of participants (44) relied on conceptual and semantic factors in that they varied clause order such that the described events are presented as they happened (*After A, B*; *A, before B*). The overall preference for iconic orders in this group was 66.75 %, with a stronger preference in the after clauses (73.12 %). These results suggest that an isomorphic mapping between conceptual structure and the order of linguistic items can be utilized as a general supporting mechanism in language learning. Furthermore, the two strategies may be

taken to reflect the tension between the principles of iconicity and syntacticity (Givón 2018) on a synchronic, individual level.

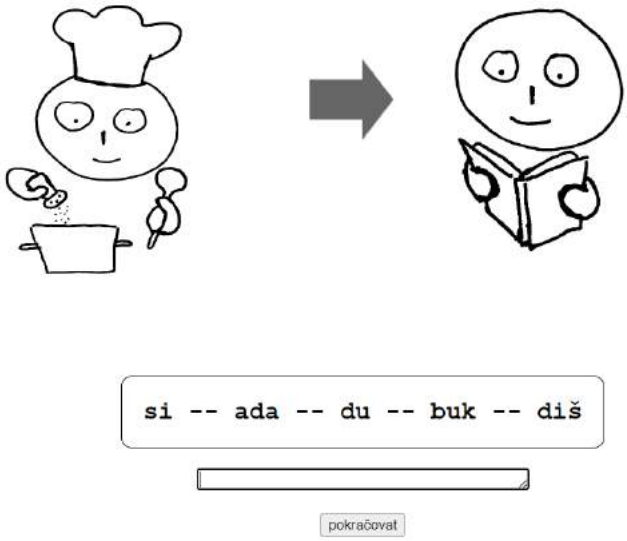

Table 1 Stimulus types in the learning phase; TAC = temporal adverbial clause.

Keywords: artificial language learning; structural iconicity; temporal adverbial clauses

References

Culbertson, Jennifer, Paul Smolensky, and Géraldine Legendre. 2013. "Testing Greenberg's Universal 18 Using the Mixture Shift Paradigm for Artificial Language Learning." In Proceedings of the 40th Annual Meeting of the North East Linguistic Society, 133–46.

Diessel, Holger. 2008. "Iconicity of Sequence: A Corpus-Based Analysis of the Positioning of Temporal Adverbial Clauses in English." Cognitive Linguistics 19 (3): 465–90. https://doi.org/10.1515/COGL.2008.018.

Givón, Talmy. 2018. On Understanding Grammar. Z.213. 2nd ed. John Benjamins Publishing Company. https://benjamins.com/catalog/z.213.

Haspelmath, Martin. 2008. "Frequency vs. Iconicity in Explaining Grammatical Asymmetries." Cognitive Linguistics 19 (1): 1–33. https://doi.org/10.1515/COG.2008.001.

Ramat, Anna Giacalone. 1995. "Iconicity in the Grammaticalization Processes." In Iconicity in Language, edited by Raffaele Simone, 119–39. John Benjamins.

Rezaee, Abbas Ali, and Seyyed Ehsan Golparvar. 2016. "The Sequencing of Adverbial Clauses of Time in Academic English: Random Forest Modelling." Journal of Language Modelling 4 (2): 225–44. https://doi.org/10.15398/jlm.v4i2.131.

Ruiter, Laura E. de, Anna L. Theakston, Silke Brandt, and Elena V.M. Lieven. 2018. "Iconicity Affects Children's Comprehension of Complex Sentences: The Role of Semantics, Clause Order, Input and Individual Differences." Cognition 171 (February): 202–24. https://doi.org/10.1016/j.cognition.2017.10.015.

Functional asymmetries between two manner demonstrative verbs in Tsou

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Demonstrative verbs are a subset of deictic expressions less explored in the linguistic literature (Guérin 2015). This paper investigates two manner demonstrative verbs *maica* 'be like this' and *maita'e* 'be like that' and their asymmetrical development in Tsou[1] based on narratives in Tung et al. (1964) and Szakos (1994), supplemented by elicited sentences and data gleaned from the online teaching materials for Tsou school children. While both verbs refer exophorically to the manner which pertains to a specific event, only *maica* 'be like this' develops the endophoric functions and is able to orient readers/listeners by referring to discourse segments anaphorically or cataphorically. Example (1) is given below for *maica* 'be like this', derived from the combination of the locational demonstrative *sica* 'MEDIAL, there' and the verb *mai* 'be like'. (1) illustrates the use of *maica* as the sole verb of the imperative sentence, in the condition when the speaker was taking a picture of someone, asking him/her not to press his chin too close to the neck.

(1) 'ote maica!
IMP.NEG.AV AV.be.like.this
'Don't be like this!' (the speaker also presses his chin close to the neck mimetically)

Example (2) shows that *maita'e* 'be like that', derived from the locational demonstrative *ta'e* 'DISTAL, there', can follow the motion verb 'walk toward, actor voice (AV henceforth)' and function as the second verb in a serial verb construction. In (1) and (2), both *maica* and *maita'e* maintain actor voice agreement with the clausal auxiliaries (*'ote* in (1), *mo* in (2)), a canonical feature for Tsou lexical verbs such as *mo'unu* 'go toward' and toalungu 'fish'.

(2) ne mo=mza mo'unu maita'e ho toalungu,
when.PST realis.AV=1PL.EXCL AV.go.toward AV.be.like.that and AV.fish
'When we went that way (the speaker pointing to the direction of the Yamasiana river) and fished, …'

Despite the shared morphosyntactic properties and exophoric functions, of the two manner verbs, only *maica* 'be like this' can function as a quotative marker, as in (3),[2] or as a discourse-structuring device to refer cataphorically to an upcoming stretch of information or anaphorically to situations expressed in the preceding discourse. In (4), *maica* 'be like this' occurs at the beginning of a narrative in which the speaker recounted a traditional ritual to pray for a Tsou newborn. A list of procedures involved in the ritual then follows this manner demonstrative verb. In (5), *maica* 'be like this' appears at the end of an ancient folklore in which a star rises following the death of a war hero, and the use of *maica* 'be like this' relates

[1] Tsou is an endangered Austronesian language spoken in southwestern Taiwan.
[2] For reading convenience, the demonstrative verb is bolded and the portion of discourse it refers to is underlined in free translation.

to the preceding discourse and wraps up the entire story. Attempts to replace *maica* 'be like this' with *maita'e* 'be like that' in (3)-(5) are deemed ungrammatical.

(3) mo maica 'e te='o e'e : la iachi bumemealx
realis.AV AV.be.like.this NOM IRR=1SG NAV.say HAB self AV.be.careful
'My words **are like this**: <u>be careful and take a rest</u>.' (Szakos 1994, 87.10-11)

ho amzocni
and AV.take.a.rest

(4) la maica ho la matkaeo
HAB AV.be.like.this when HAB ritual.name
'The *matkaeo* ritual is **like this.**' (Tung et al. 1964,1-32.001)

la fa-eni ho mi=cu etotavei to hicu
HAB give-BV and REALIS.AV=COS AV.pray OBL spirit
<u>'(People) hand over (newborns) and pray to the spirit</u>…' (1-32.002)

(5) mo=c'o acxhx maica 'o moso la euozomx
REALIS.AV=just AV.all AV.be.like.this nom REALIS.AV HAB war.hero
'(<u>When a war hero died, after one month, people would see a star in the sky</u>.) War heroes were all **like this.**' (Tung et al. 1964,1-47.006)

The ability to relate to an adjacent stretch of discourse may further provide the bridging context for *maica* 'be like this' to develop the function of a conjunctive adverb (see also Diessel and Breunesse 2020). As shown in (6), *maica* can be used to direct the interlocutors' attention to a following proposition and specify a relation of reason ('because') between the proposition it introduces and the preceding one.

(6) mi=cu e'ohx. maica os='o aok-a tenv-a
realis.AV=already AV.set.out like.this/because NAV=1SG continue-PV call-PV
'(He) already set out, because I kept calling (him).'

Keywords: demonstrative verb; manner; anaphoric; cataphoric

References

Diessel, Holger, and Merlijn Breunesse. 2020. "A typology of demonstrative clause linkers." In *Demonstratives in discourse*, edited by Åshild Næss, Anna Maretts and Yvonne Treis, 305-41. Berlin: Language Science Press.

Guérin, Valérie. 2015. "Demonstrative verbs: A typology of verbal manner deixis." *Linguistic Typology* 19(2): 141-199.

Tung, T'ung-ho, with the assistance of S.H. Wang, T.K. Kuan, T.F. Cheng, and Margaret M. Yan. 1964. *A descriptive study of the Tsou language, Formosa*. Institute of History and Philology Special Publications, No. 48. Taipei: Institute of History and Philology, Academia Sinica.

Szakos, József. 1994. "Die sprache der Cou. Untersuchungen zur synchronie einer austronesischen sprache auf Taiwan." PhD diss., The University of Bonn.

Factors affecting L2 speech fluency, with a special focus on the effect of self-perceived L2 competence and communication confidence

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L2 speech can be approached from various perspectives and characterized as the interplay of accurate and intelligible speech sounds and fluently produced utterances. L2 speech fluency, understood as the smoothness and fluidity of speech, often linked with prosodic features, has been widely researched from the perspective of L2 proficiency (e.g., Peltonen & Lintunen, 2016), L1 speech fluency (e.g., De Jong & Mora, 2019; Peltonen, 2018), task type (e.g., Wright, 2020), study abroad experience (e.g., Tavakoli, 2018) and L2 fluency development in instructed setting (e.g., Peltonen & Lintunen, 2019). However, how individual learner characteristics, such as self-perceptions of L2 competence and communication confidence (L2 CC) of L2 speakers, are related to L2 utterance fluency have been less extensively investigated. Nevertheless, some previous studies provide the link between self-perceived L2 competence and L2 communication frequency (Balouchi & Samad, 2021), which creates opportunities for L2 fluency gains. Moreover, there is evidence for L2 CC being among the strongest predictors of L2 willingness to communicate (WTC) (Peng & Woodrow, 2020; Yashima, 2002; Yashima et al., 2004), whose role in L2 speech fluency has recently been observed (Kim et al., 2022; Nematizadeh, 2021). Little is known, however, how both L2 self-perceived competence and L2 CC directly interplay with L2 speech fluency.

To meet this end, the current study, which is a part of a larger project, investigated a group of 102 advanced L2 learners who performed a monologue task in order to capture their L2 utterance fluency, measured with speed fluency (articulation rate), breakdown fluency (filled pauses and silent pauses) and composite fluency measures (speech rate, mean length of run, phonation-time ratio). The levels of L2 CC were established with the scale of CC, devised by Mystkowska-Wiertelak and Pawlak (2017), and the perceptions of L2 competence were reported through an online questionnaire. Correlational analyses provided some interesting insights into intricate relationships between various utterance fluency measures and both L2 self-perceived competence and L2 CC levels. Moreover, a strong positive relationship was found between self-appraisal of L2 skills and communication confidence. The aim of this presentation is also to present the larger project framework on the possible factors affecting L2 speech fluency in general.

Keywords: speech fluency; communication confidence; self-perception

References

Balouchi, Shima, and Arshad Abdul Samad. 2021. “The effect of perceived competence on second language communication fluency: The mediating roles of motivation, willingness to communicate, and international posture.” *Education and Information Technologies* 26 (5): 5917–5937.

De Jong Nivja H., and Joan C. Mora. 2019. “Does having good articulatory skills lead to more fluent speech in first and second languages?” *Studies in Second Language Acquisition* 41 (1): 227–239.

Kim, Jeongmin, Helen Zhao, and Chloé Diskin-Holdaway. 2022. “Willingness to Communicate and second language fluency: Korean-speaking short-term sojourners in Australia.” *Languages* 7 (2): 112.

Mystkowska-Wiertelak, Anna, and Mirosław Pawlak. 2017. *Willingness to communicate in instructed second language acquisition: Combining a macro- and micro-perspective*. Bristol: Multilingual Matters.

Nematizadeh, Shahin. 2021. “Willingness to communicate and second language speech fluency: An idiodynamic investigation of attractor states.” *Journal for the Psychology of Language Learning* 3 (1): 26–49.

Peltonen, Pauliina. 2018. “Exploring connections between first and second language fluency: A mixed methods approach.” *The Modern Language Journal* 10 (4): 676–692.

Peltonen, Pauliina, and Pekka Lintunen. 2019. “Short-term development of L2 fluency in formal instruction: A mixed methods study.” Paper presented at the 29th EuroSLA conference, Lund, Sweden.

Peltonen, Pauliina, and Pekka Lintunen. 2016. “Integrating quantitative and qualitative approaches in L2 fluency analysis: A study of Finnish-speaking and Swedish-speaking learners of English at two school levels.” *European Journal of Applied Linguistics* 4 (2): 209–238.

Peng, Jian-E., and Lindy Woodrow. 2010. “Willingness to communicate in English: A model in the Chinese EFL classroom context.” *Language Learning* 60 (4): 834–876.

Tavakoli, Parvaneh. 2018. “L2 development in an intensive study abroad EAP context.” *System* 72: 62–74.

Wright, Clare. 2020. “Effects of task type on L2 Mandarin fluency development.” *Journal of Second Language Studies* 3 (2): 157–179.

Yashima, Tomoko. 2002. “Willingness to communicate in a second language: The Japanese EFL context.” *Modern Language Journal* 86 (1): 54–66.

Yashima, Tomoko, Lori Zenuk-Nishide, and Kazuaki Shimizu. 2004. “The influence of attitudes and affect on willingness to communicate and second language communication.” *Language Learning* 54 (1): 119–152.

Rethinking null expletives in Mandarin Chinese

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While some scholars follow Li's (1990) conclusion that Chinese lacks null expletive subjects, others assume that existential sentences based on *yǒu* 'have' as instantiated by (1) have a covert counterpart of English expletive there (Li 1996, Han 2001, Dai 2003, Tang 2003). Since Mandarin Chinese does not have overt expletives, the motivation for positing null expletives is theory internal: assuming that the EPP is universal. In this paper, we revisit these syntactic contexts that involve null subjects and distinguish between two situations, that is, one involves a weak pronoun null *pro* whose meaning is dependent on the context of utterance (similar to Tortora's (2014) weak *pro*-form in Borgomanerese), the other does not. Neither involves a null expletive.

(1) a. yǒu [$_{pivot}$ kèrén].
have guest
'There are guests in the context.'
b. yǒu [$_{CP}$ [$_{pivot}$ yí-ge xuéshēng] [$_{coda}$ hěn cōngming]].
have one-CLF student very intelligent
'There is one student that is intelligent.'

Syntactic contexts that involve a *pro* include existential sentences based on *yǒu* 'have' without a coda as in (1a), non-change-of-state unaccusative verbs such as *lái* 'come', weather predicates such as *xià-yǔ* 'fall-rain' and the complement of *zài* 'at'. These cases obligatorily imply 'reference to the place or time of the utterance' (Teng 1978), as exemplified by (1a). We argue that *pro* is interpreted as referring to the context of utterance, not to any referential location or time. We show that this *pro* must be distinguished from an overt location subject, otherwise we would fail in accounting for the fact that only an overt location subject can permet an obligatorily quantified phrase in the pivot (2a, modelled upon McNally (1997)) and can form a pure/ontological existential (2b, see also Czinglar (2003) on Alemannic dialects).

(2) a. *(túshūguǎn-lǐ) yǒu dà-bùfen lèixíng de shū
library-in have big-part type de book
'There are most types of books in the library.'
b. *(yǔzhòu-lǐ) yǒu yí-ge shàndì.
universe-in have one-CLF god
'In the universe there is one god.'

(3) _ shì [$_{CP}$ Zhāngsān [qù-le Bālí]], bú shì Lǐsì.
be Zhangsan go-PERF Paris, NEG be Lisi
'It is Zhangsan that went to Paris, not Lisi'

By contrast, we do not detect the context-dependent meaning in the *yǒu* 'have'-existential with a coda (1b) or in focus constructions involving *shì* 'be' (3). We analyse them as involving a CP complementing *yǒu* and *shì*. Instead of assuming a null expletive *pro* to fill in the subject position (see also Wurmbrand 2006), we argue that the EPP can in fact be satisfied by assuming a D feature encoded in *yǒu* and *shì*, given that *shì* has a demonstrative origin (Long & Kuang 2017) and *yǒu* is diachronically related to the indefinite pronoun akin to English *some* (Yang & He 1992). This proposal explains why we can only observe this type of 'null subject' constructions with these two predicates, not with lexical verbs in Chinese.

Keywords: null expletives; EPP; existential sentences; Mandarin Chinese

References

Burns, John. 2010. *A Book on Quotations in Academic Papers*. London: Fictional Publishing House. [an example of a book by a single author]

Czinglar, Christine. 2002. Decomposing existence: Evidence from Germanic. In *Issues in Formal German(ic) Typology*, 85–126. Edited by Werner Abraham and Jan-Wouter Zwart. Amsterdam: John Benjamins.

Dai, M.C. 2003. *Generalized Leftward Merge Theory: a Minimalist Approach to Adjuncts , Existentials Parasitic Gaps and Middle Constructions*. Beijing: Foreign language and research Press.

Han, J.Q. 2001. Existential sentences in English and Chinese towards a generative analysis. Xian dai waiyu (modern foreign language)(2).143-158.

Li, Yen-hui Audrey. 1990. *Order and constituency in Mandarin Chinese*. Dordrecht: Kluwer Academic Publishers.

Li, Y.-H. Audrey. 1996. Definite and indefinite existential constructions. *Studies in the Linguistic Sciences*, 26, 175-191.

Long, H. & Kuang, P. 2017. Modern Chinese confirmative shi. *Functions of Language*, 24(3), 294–318. doi:

McNally, Louise. 1997. *An interpretation for the English existential construction*. New York: Garland Publishing.

Teng, Sou-hsin. 1978. Modification and the structures of existential sentences. In R. C. Cheng, Y. C. Li, and T. C. Tang (eds.), *Proceedings of Symposium of Chinese Linguistics*, LSA, 197-210. Taipei: Student Books.

Tang, Y.C. 2003. *Existential Construction: a Minimalist Approach*, Doctoral dissertation, GDUFS, Guangzhou

Tortora, Christina. 2014. *A comparative grammar of Borgomanerese*. Oxford: Oxford University Press.

Yang, Bo-Jun and Le-Shi He. 1992. Gu Han Yu Yu Fa Ji Qi Fa Zhan [Classic Chinese Grammar and its Development], Yuwen Chubanshe, Beijing.

Wurmbrand, Susanne. 2006. Licensing case. *Journal of Germanic Linguistics* 18(3). 175–236.

This, that, and the unmarked demonstrative in Northern Khanty: defining the phenomena

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The present study provides a preliminary description of the Northern Khanty (Ob-Ugric < Uralic; Russia) demonstrative system based on Wilkins' experimental questionnaire (Wilkins 2018) and additional examples, including the questionnaire from (Rostovtsev-Popel' 2009). At this stage we aim to determine which factors are relevant for exophoric uses of demonstratives and to establish more or less clear contexts in which each demonstrative is acceptable. The data were collected during fieldwork in the village of Kazym (Khanty-Mansi Autonomous Region—Yugra, Russia) in 2022 and 2023 via elicitation. All the data reported here were revised at least with 10 consultants.

Previous descriptions vary in the number of Northern Khanty demonstratives (2 or 3) and are very concise regarding their semantics (Kaksin 2010, 93–95), (Nikolaeva 1999, 16). Our data speak in favour of a tripartite person-oriented system: proximal to the speaker *tăm*, distal from speaker and addressee *tum*, and unmarked *śi*, which is sometimes reported as anaphoric only. However, their distribution is not trivial.

Wilkins' questionnaire let us determine the deictic centre, spheres of use for each demonstrative, and relevance of visibility. In our case *tăm* takes the speaker as the deictic centre, while *tum* and *śi* take both speech act participants (SAP). *Tăm* is used in the speaker's peripersonal space (PPS), i.e. with referents in arm's reach and closer (see distance domains in (Wilkins 2018, 60–66)). For instance, in stimuli 1, 3 and 7 from Wilkins' questionnaire (further WQ1, WQ3, WQ7) *tăm* is the only acceptable option, and if the referent is beyond speaker´s PPS, like in WQ10, *tăm* is prohibited. *Tăm* is also acceptable when the referent is invisible, as in WQ11 where it is behind the speaker´s back.

Tum is used with visible referents beyond the personal spaces of speaker, hearer and the social space of conversation. For example, it can be used in WQ21 (the referent is several metres away from both SAP) and is unavailable in WQ7 and WQ16 as it is in the social space of conversation. We consider the social space of conversation and not pure distance to be important because some consultants accepted *tum* even in WQ10, where the referent is near the addressee, but beyond the social space of conversation.

We hypothesize that *śi* is unmarked with respect to distance and its distribution in exophoric uses is solely constrained by considerations of competition with the other two demonstratives. *Tăm* and *tum* are in complementary distribution, while *śi* can be an alternative option for them, as in WQ4 (referent in contact with body of addressee and in arm's reach of speaker, *tăm* and *śi* acceptable), WQ12 and WQ24 (referent a couple of metres from SAP and referent several hundred metres away from SAP respectively, *tum* and *śi* acceptable in both contexts). To be precise, *śi* is always accepted when *tum* is accepted, and is an alternative to *tăm* when a conflict of personal spaces arises, as in WQ4. It is also important that in contrastive contexts only *tăm* and *tum* are opposed. The hypothesis of unmarkedness of *śi* is

supported by the fact that *śi* has grammaticalized other uses such as the anaphoric demonstrative (about markedness and grammaticalization see, e.g., (Monks, Davidson 2021)).

However, although Wilkins' questionnaire is good for typological comparison, it is also quite limited in terms of one language as it considers mostly reference to small and easily movable objects. Taking into consideration additional data, it seems more appropriate to speak about a kind of a relative scale for different types of objects: if the referent is in its "normal" or minimum possible distance from the speaker or SAP, the proximal demonstrative *tăm* is used. For instance, it is used to refer to the car passing by the speaker and the lamp on the ceiling. These data will be discussed ın more detail in the talk.

According to (Diessel 2013), tripartite demonstrative systems are the second most common in world's languages. Such systems constitute about 37.6%, and approximately one third of them are person-oriented. So, the Northern Khanty system is not typologically frequent. In comparison with Turkish and Japanese (Wilkins 2018, 55–60), having three term systems, it is clear that Northern Khanty *śi* is for sure unlike the Japanese addressee-proximal *so*, and Northern Khanty *tum* differs from the Turkish speaker-anchored distal demonstrative *o*, which is compatible with addressee-close referents, unlike *tum*. Thus, the current study contributes to the growing typology of three term demonstrative systems.

Apart from these generalizations, some facts remain unclear and require further investigation. For example, the status of *śi* is in general unclear, as it is highly grammaticalized in Northern Khanty, including the meanings of focus particle and anaphoric demonstrative. Possibly, it functions as a kind of salient demonstrative (see, for instance, (Reisinger, Huijsmans 2021)).

Keywords: demonstratives; spatial deixis; exophoric uses; unmarkedness

References

Diessel, Holger. 2013. "Distance Contrasts in Demonstratives." In *WALS Online* (v2020.3) [Data set], edited by Matthew Dryer and Martin Haspelmath. Accessed May 4, 2023. http://wals.info/chapter/41

Kaksin, Andrey. 2010. *Kazymskij dialekt khantyjskogo yazyka*. Khanty-Mansiisk: Yugorskii gosudarstvennyi universitet.

Monks, Tess, and Davidson, Kathryn. 2021. "Demonstrative Shift and Proximal Markedness." Slides for the talk in *Formal Diachronic Semantics 6*. Accessed May 4, 2023. http://www.lukasz-jedrzejowski.eu/conferences/FoDS6/Monks%26Davidson_slides.pdf

Nikolaeva, Irina. 1999. *Ostyak*. München; Newcastle: LINCOM Europa.

Reisinger, Daniel, and Huijsmans, Marianne. 2021. "Demonstratives in ʔayʔaǰuθəm." *Papers for the International Conference on Salish and Neighboring Languages* 56: 305–375.

Rostovtsev-Popel', Aleksandr. 2009. "Tipologiya demonstrativov: srednie dejktiki." *Voprosy yazykoznaniya* 2: 22–34.

Wilkins, David. 2018. "The Demonstrative Questionnaire: "THIS" and "THAT" in Comparative Perspective." In *Demonstratives in Cross-Linguistic Perspective*, edited by Stephen Levinson, 43–71. Cambridge: Cambridge University Press.

Principal Component Analysis of Written Arabic Dialects

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Arabic dialects are often considered to be socio-linguistic constructs rather than geographical phenomena (Cadora 1992), however, geographical diversity plays a crucial role, especially when we consider dialects not diachronic relics, but living dynamic languages. In today's world, differences between bedouin, urban, and rural dialects are more likely to be leveled, and state borders play a larger role than in the past. Our paper presents an empirical study of the current state of Arabic dialects, focusing specifically on texts written in the Arabic script.

Some distinctive features of dialects always played a role of some kind of "shiboleths" that diversify between dialects (as seen in dialectological atlases, e.g. Behnstedt and Woidich 2011, Behnstedt and Kleinberger 2019). However, selection of these features should be done intersubjectively, transparently and empirically, e.g. by using Principal Component Analysis (PCA). Despite the vast amount of material written about Arabic dialects, it is surprising that a PCA of written dialects has yet to be undertaken. We are happy to fill this gap by this study.

The features that make the most striking distinctions between dialects are typically phonetic in nature (Owens 2003), but our study focuses on written language, more specifically on texts written in the Arabic script, as it is naturally used by Arabic speakers. Therefore, we rely on the corpus of written Arabic dialects that is newly emerging within the Welcome project: *Reception, Management and Integration of Third Country Nationals*. The Arabic script levels certain elements, particularly the absence of vowels is very important as they are highly distinctive for dialect recognition. Hence, it is interesting to see which features took on the role of the distinctive elements that are lost in the script. The initial set of examined features includes mainly character and word n-grams, as well as several diversity measures.

It is not possible to fully describe the findings of this study in the abstract, however, as a preview, Figure 1 illustrates how the first four components effectively classified the texts in the corpus. This paper will examine the individual features that play a role in the formation of the components and how dialects cluster according to these components.

The study focuses on a six important Arabic dialects, namely Levantine dialects (Jordanian, Lebanese, Palestinian and Syrian), Egyptian, and Moroccan *Darija*.

Keywords: Principal Component Analysis; Arabic; Dialects

References

Behnstedt, Peter, and Aharon Geva Kleinberger. *Atlas of the Arabic Dialects of Galilee (Israel): With Some Data for Adjacent Areas*. Brill, 2019.

Behnstedt, Peter, and Manfred Woidich. *Wortatlas der arabischen Dialekte*. Vol. 100. Brill, 2011.

Cadora, Frederic J. *Bedouin, village and urban Arabic: An ecolinguistic study*. Vol. 18. Brill, 1992.

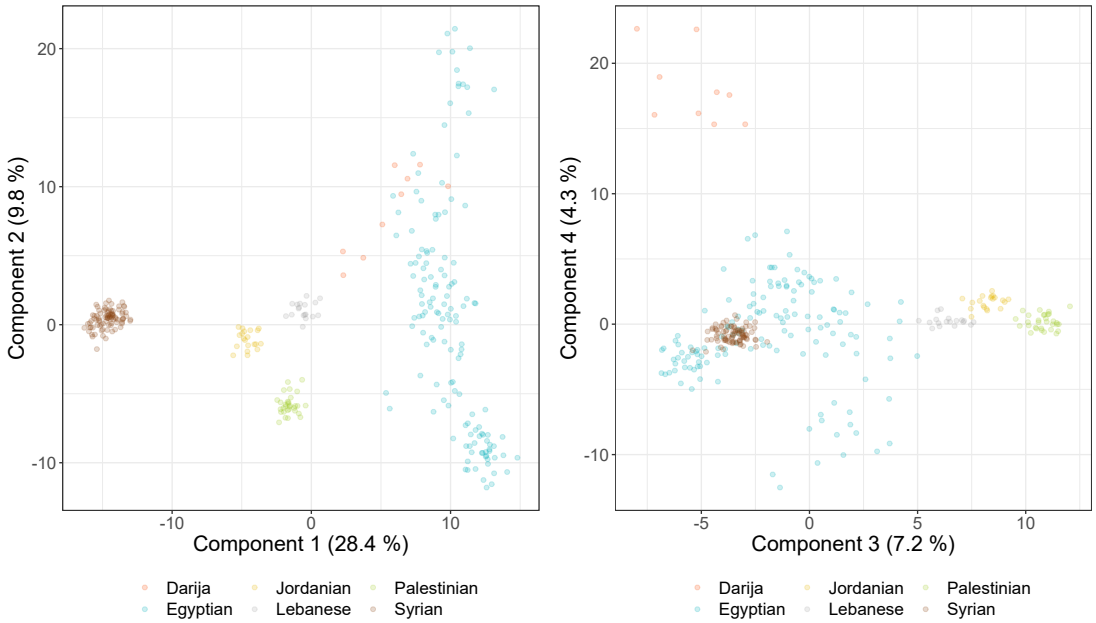

Figure 1: First four components.

Owens, Jonathan. “Arabic dialect history and historical linguistic mythology”. *Journal of the American Oriental Society* 123, no. 4 (2003): 715–740.

The acquisition of syntax and semantics of telicity in L2 English by Slovak and Spanish speakers

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The presentation deals with the acquisition and processing of telicity in L2 English by Slovak and Spanish learners. The project was motivated both theoretically, i.e., by differences between Slovak vs. English and Spanish in the assembly of syntactic features of inner aspect and in the possibilities of aspectual coercion by means of adverbial modifiers (MacDonald 2008), and empirically, i.e., by divergent results obtained by offline vs. online experiments dealing with the L2 acquisition of tense and aspect in L2 English by speakers of various L1s (Chan 2013; Roberts & Liszka 2013; Renaud 2011, etc.).

Telicity judgments depend both on interpretations of predicate telicity (verbs and object arguments), represented by processes in narrow syntax (MacDonald 2008; Slabakova & Montrul 2008; Travis 2010) and illustrated in (1)-(4) and on combinations of predicates with adverbial modifiers illustrated in (5)-(10), which do not trigger feature-checking operations in narrow syntax, i.e., they represent the syntax-discourse interface (Slabakova & Montrul 2008). The study contributes to previous research on L2A of the temporal-aspectual domain by testing the hypothesis, according to which linguistic features involving interfaces (e.g., syntax-pragmatics interface or syntax-semantics interface) are more difficult to acquire for L2ers than features involving only one linguistic component (e.g., syntax) (Pérez-Leroux, Cuza, Majzlanova & Sánchez-Naranjo 2008; Slabakova & Montrul 2008). In addition, the role of individual variables (LoS, proficiency, etc.) in the interpretations of telicity encoding based on syntactic and pragmatic cues is also examined.

The theoretical part of the presentation offers an overview of available minimalist analyses of inner aspect (MacDonald 2008; Slabakova and Montrul 2008) and an analysis of aspectual coercion (MacDonald, 2008; Dölling 2003) in Slavic, English and Spanish. While in Slovak telicity is conveyed by means of perfectivizing preverbs (Slabakova 2000), in English and in Spanish cardinality of the DP object is crucial for aspectual interpretation: a [+cardinal] DP yields a [+telic] AspP, while a [-telic] reading is generated in the context of a bare/mass noun. Previous research has shown that this interaction between interpretable ([±telicity], [±cardinality]) and uninterpretable ([±accusative case], [±partitive case]) features causes difficulties in computing telicity in activities and accomplishments by L2ers whose L1 is a Slavic language where cardinality of Od is not relevant to telicity encoding (Slabakova & Montrul 2002; Slabakova 2000). In addition, while predicate telicity in English and in Spanish can be changed by means of aspectual coercion, in Slovak, these meanings are expressed through verbal morphology, i.e., by means of verbal suffixes and preverbs that fulfil the role of aspect or situation type shifters (Filip 1993).

The experimental part, motivated by these differences, reports preliminary results of an offline AJT and an online SPRT conducted with a control group of NSs of AmE and two experimental groups (L1 Spanish vs. L1 Slovak speakers). The data from the AJTs analyzed through a series of LMEMs indicate that telicity encoding based on syntactic cues is acquired earlier (at lower proficiency levels) by speakers of both L1s than interpretations of aspectual coercion, improves with an increasing exposure to L2 English operationalized as LoS in an English-speaking country.

Sentence structures tested in AJT and SPRT

(1) John ate a cake, and he finished it.
(2) *John ate a cake, and he is still eating it.
(3) John ate cakes, and now he eats ice cream.
(4) * John ate cakes, and he is still eating them.
(5) John wrote letters for half an hour yesterday
(6) * John wrote letters in half an hour yesterday.
(7) John wrote the letter in half an hour yesterday.
(8) # John wrote the letter for half an hour yesterday.
(9) # The girl spotted the plane for five minutes yesterday.
(10) The girl spotted the plane in five minutes yesterday.

Keywords: telicity; English; Slovak, Spanish; acceptability judgments

Selected References

Chan, Ho Leung 2013. "Aspectual Coercion in Non-Native Speakers of English." In *CogSci 2013 Proceedings*, edited by Markus Knauff, Michael Pauen, Natalie Sebanz, and Ipke Wachsmuth, 2006-2011. Austin, Tx: Cognitive Science Society.

Dölling, Johannes. 2003. "Flexibility in Adverbial Modification: Reinterpretation as Contextual Enrichment." In *Modifying Adjuncts*, edited by Ewald Lang, Claudia Maierborn, and Cathrine Fabricius-Hansen, 511-552. Berlin: Mouton de Gruyter.

Filip, Hana. 1993. "Aspect, Situation Type and Nominal Reference." PhD diss, UC Berkeley.

MacDonald, Jonathan E. 2008. *The Syntactic Nature of Inner Aspect. A Minimalist Perspective*. Amsterdam: John Benjamins.

Pérez-Leroux, Ana T., Alejandro Cuza, Monika Majzlanova, and Jeannette Sánchez-Naranjo. 2008. "Non-Native Recognition of the Iterative and Habitual Meanings of Spanish Preterite and Imperfect Tenses." In *The Role of Formal Features in Second Language Acquisition,* edited by Juana Liceras, Helmut Zobl, and Helen Goodluck, 432–453. New York: Routledge.

Roberts, Leah, and Sarah Liszka. 2013. "Processing Tense/Aspect Agreement Violations Online in the Second Language: A Self-Paced Reading Study with French and German L2 Learners of English." *Second Language Research* 29(4): 413-439.

Slabakova, Roumyana. 2000. "L1 Transfer Revisited: The L2 Acquisition of Telicity Marking in English by Spanish and Bulgarian Native Speakers." *Linguistics 38*(4): 739-770.

Slabakova, Roumyana, and Silvina Montrul. 2008. "Aspectual Shifts: Grammatical and Pragmatic Knowledge in L2 Acquisition." In *The Role of Formal Features in Second Language Acquisition,* edited by Juana Liceras, Helmut Zobl, and Helen Goodluck, 456–483. New York: Routledge.

Travis, Lisa deMena. 2010. *Inner Aspect: The Articulation of VP.* Dordrecht: Springer.

Age-related differences in geminate production in Hungarian-speaking children's, younger and older adults' spontaneous speech

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Research on the phonetic realisation of distinctive consonant length in various languages (e.g., Lahiri–Hankamer 1988; Esposito–Di Benedetto 1999; Hirata–Whiton 2005; Ridouane 2010) confirmed that duration is the primary acoustic correlate of the consonant length contrast with enhancement by additional correlates, such as adjacent vowel duration (Hermes et al. 2020). Acoustic properties of singletons vs. geminates were mostly examined based on (near) minimal pairs in isolation, or embedded in carrier sentences. There is only limited research on geminate production in spontaneous speech (e.g., Khattab 2007); however, this speech style may have different timing patterns (shorter segment duration, more reduction) than read/careful speech (Ernestus–Warner 2011). Segment durations are related to articulation rate, which is known to change across the lifespan. Articulation rate is generally lower in childhood and in the elderly than in young adult age due to anatomical, psychological, cognitive changes (Bóna 2014; Bóna–Váradi 2022). While children's geminate production has been examined (Aoyama 2000; Vihman–Maorano 2017), the acoustic correlates of consonant length contrast, to our knowledge, have not been investigated in elderly speech.

The aim of the present study is two-fold: (i) to study the effect of age on geminate production; (ii) to describe the durational correlates of consonant length in spontaneous speech, i.e., in a speech style that is relatively close to everyday language use, thus, supposed to be under-articulated. We hypothesized that (i) segment durations related to consonant length differ as a function of age; (ii) there are considerable overlaps between singleton and geminate durations in spontaneous speech in all age groups.

Spontaneous speech samples were obtained from 30 speakers. 10 children aged between 7–8 years, 10 younger adults aged between 21–32 years, and 10 older adults aged between 70–85 years (adults' data from BEA database; Neuberger et al. 2014). Intervocalic short and long /t, k, n, ɲ/ plosives and nasals were selected that occurred word-medially in 2-4-syllable words, flanked by short /ɒ, ɛ, o, i/ vowels. Consonant duration, closure duration and VOT, adjacent vowel duration were measured using Praat (Boersma–Weenink 2020). Articulation rate (syll/sec) was measured during the utterances in which the target words were embedded. Linear mixed effect models were run in R (R Core Team 2020) on durational parameters (dependent variables) with age, length, and consonant and vowel type as fixed factors, and speaker as random factor.

Preliminary results confirmed that length categories were better distinguished by duration in adults than in children. Durational patterns of geminates of elderly speakers fell in between those of the two above age groups. Voice onset time seemed to be unaffected by gemination in Hungarian. Secondary acoustic cues of the length contrast (associated with the timing of adjacent vowels) showed adult-child differences, which provide information about refining

timing skills and emerging phonetic/phonological abilities. These findings may contribute to a better understanding of the phonetic realization of the phonological length contrast and highlight age-related differences in speech timing control.

Keywords: geminate; duration; age effect; spontaneous speech; Hungarian

References

Aoyama, Katsura. 2000. “A psycholinguistic perspective on Finnish and Japanese prosody: perception, production and child acquisition of consonantal quantity distinctions. “ PhD diss., University of Hawaii.

Boersma, Paul, and David Weenink. 2020. “Praat: doing phonetics by computer [Computer program].” *Retrieved 3 December 2020.* https://www.praat.org

Bóna, Judit. 2014. “Temporal characteristics of speech: The effect of age and speech style.” *The Journal of the Acoustical Society of America* 136 (2): 116–121.

Bóna, Judit, and Viola Váradi. 2022. “Speech tempo in Hungarian speaking children and adolescents: The effects of age and speaking tasks.” *The Journal of the Acoustical Society of America* 152 (1): 184–192.

Ernestus, Mirjam, and Natasha Warner. 2011. “An introduction to reduced pronunciation variants.” *Journal of Phonetics* 39 (SI): 253–260.

Esposito, Anna, and Maria Gabriella Di Benedetto. 1999. “Acoustical and perceptual study of gemination in Italian stops.” *The Journal of the Acoustical Society of America* 106 (4): 2051–2062.

Hermes, Anne, Sam Tilsen, and Rachid Ridouane. 2020. “Cross-linguistic timing contrast in geminates: A rate-independent perspective.” *Proceedings of the 12th International Seminar on Speech Production (ISSP2020).* 52–55.

Hirata, Yukari, and Jacob Whiton. 2005. “Effects of speaking rate on the single/geminate stop distinction in Japanese.” *The Journal of the Acoustical Society of America* 118 (3): 1647–1660.

Khattab, Ghada. 2007. “A phonetic study of gemination in Lebanese Arabic. “ *Proceedings of the XVI. International Congress of Phonetic Sciences*, 153–158.

Lahiri, Aditi, and Jorge Hankamer. 1988. “The timing of geminate consonants.” *Journal of Phonetics* 16 (3): 327–338.

Neuberger, Tilda, Dorottya Gyarmathy, Tekla Etelka Gráczi, Viktória Horváth, Mária Gósy, and András Beke. 2014. “Development of a large spontaneous speech database of agglutinative Hungarian language.” *Text, Speech and Dialogue: 17th International Conference, TSD 2014,* Springer International Publishing, 424–431.

R Core Team. 2020. “R: a language and environment for statistical computing. ” *Foundation for Statistical Computing*.

Ridouane, Rachid. 2010. “Geminates at the junction of phonetics and phonology.” *Papers in laboratory phonology* 10: 61–90.

Vihman, Marilyn, and Marinella Majorano. 2017. “The role of geminates in infants' early word production and word-form recognition.” *Journal of child language* 44 (1): 158–184.

The (nearly) Neutral Case System of English

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Marantz's Dependent Case Theory (DCT - 1991), originally proposed to account for accusative and ergative case systems, allows dependent case to be assigned in transitive contexts to either the subject or object and unmarked case to DPs not assigned dependent case. While English is usually assumed to have an accusative system (but see Hudson 1995, Emonds 1976, 1985), under Marantz's argument that the licensing function of abstract 'case' has nothing to do with morphological case, it is incongruous to claim this when it only demonstrates a distinction on six of its lexical items. But if English does not have an accusative system, how are we to account for the apparent accusative behavior of its pronouns in a way which is consistent with current theoretical assumptions?

Accepting Baker's (2015) claim that the domains which determine the conditions of assignment of dependent case are Spell-Out domains of Phase Theory (Chomsky 2000, 2001), including VP, we argue that in English only unmarked case can be assigned as there are no truly transitive domains. This is totally consistent with the situation for most English DPs.

To account for the distribution of the different forms for pronouns we argue, contra Baker, that the realization of case forms is independent of case assignment and is determined post syntactically through late insertion (Halle and Marantz 1993). As Baker points out, "The possibility of a single case value being spelled out as different case affixes in different contexts is common" (2015, p. 17). This does not mean that there is no syntactic aspect to case assignment, as one reviewer assumes, but that the syntax of case assignment is much simplified, allowing only two structural cases: dependent and unmarked. From this perspective, traditional terms such as *nominative, accusative, dative,* etc. refer to different realizations of these two cases in different contexts. There is reason to believe from the Hungarian nominative-dative alternation (Newson and Szécsényi 2020) that these contexts are defined differently to case domains, hence the process of case realization is not restricted to the syntactic contexts that case assignment is. This supports our claims.

Our claim that English has a neutral case system, assigning only unmarked case to all its DPs in the clausal domains, means that 'nominative' and 'accusative' pronoun forms are merely lexically determined realizations of this case in different contexts. We argue that the nominative form is restricted to finite contexts and the accusative form is the elsewhere condition, accounting for the widespread appearance of this form. This situation has apparently arisen due to the historical development of the language from a true accusative system to a neutral one in which the lexical forms of a small number of high frequency elements have been contextualized, approximating the original system.

English double object constructions offer a possible transitive domain in which dependent case could be assigned. We will argue that this does not happen and that both objects are assigned unmarked case for the same reason that dependent case is not assigned in neutral case systems, such as in Chinese. Baker (2015) adds two more conditions on the assignment

of dependent case to those introduced by Marantz. One of these allows for dependent case not to be assigned at all and hence a neutral case system arises in which all DPs are assigned unmarked case.

Despite the neutral system operating at clausal level, we will maintain that English is not a totally case neutral language in that genitive is its one dependent case. As argued by Newson (2019), the unmarked case in the DP is realized, as elsewhere, by the accusative form found in the ACC-ing gerund. The genitive case must therefore be taken to be a dependent case. This leads us to the conclusion that, contrary to the current widespread belief, the possessive ‘’s’ is a case morpheme. We offer arguments counter to those which are standardly claimed to show that this is not the case. For example, the argument that the possessive ‘’s’ behaves unlike a case morpheme because it does not attach to the head noun of the case marked DP is invalidated by the numerous instances where case morphemes are realized as clitics or even independent elements such as prepositions. The claim that this element is a determiner runs into problems due to its absence with pronoun possessors. The complementary distribution between genitive marked pronouns and the possessive ‘’s’ is straightforwardly captured if the latter is analyzed as a case morpheme.

Keywords: Dependent Case Theory; case assignment and realization; English pronouns.

References

Baker, Mark. 2015. *Case: Its Principles and Parameters*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781107295186

Chomsky, Noam. 2000. “Minimalist inquiries: The framework.” In Roger Martin, David Michaels and Juan Uriagereka, (eds.). *Step by Step*. Cambridge, Mass.: MIT Press. 89-155.

Chomsky, N. 2001. “Derivation by phase.” In Michael Kenstowicz (ed.). *Ken Hale. A Life in Language*. Cambridge, Mass.: MIT Press. 1-52.

Emonds, Joseph. 1976. *A transformational approach to English syntax*. New York: Academic Press.

Emonds, Joseph. 1985. *A unified theory of syntactic categories*. Dordrecht: Foris.

Halle, Maurice. & Alex Marantz. 1993. “Distributed morphology and the pieces of inflection.” In Kenneth Hale and Samuel J. Keyser (eds.). *The View from Building 20*. Cambridge, Mass.: MIT Press. 111–176.

Hudson, Richard. 1995 “Does English really have case?” *J. Linguistics* 31: 375–392.

Marantz, Alec. 1991. “Case and licensing.” In German Westphal, Benjamin Ao and Hee-Rahk Chae (eds.). *Proceedings of the 8th Eastern States Conference on Linguistics (ESCOL 8)*. Ithaca, NY: CLC Publications. 234-253.

Newson, Mark. 2019. “Unmarked accusative in non-finite domains: the English acc-ing gerund.” In: Joseph Emonds, Markéta Janebová and Ludmila Veselovská (eds.). *Language Use and Linguistic Structure: proceedings of the Olomouc Linguistics Colloquium 2018,* Olomouc Modern Language Series Vol. 7. Oloumuc: Palacký University. 65-78.

Newson. Mark and Szécsényi, Krisztina. 2020. “Dative as the unmarked unmarked case in Hungarian.” In Markéta.Ziková, and Marcin Wągiel (eds.). *Linguistica Brunensia* 68(2). Brno: Masaryk University. 27-44. https://doi.org/10.5817/LB2020-2-3.

The perceptual reality of Czech word stress in native and non-native listeners

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The phonetics and phonology of word-level stress vary across languages. There are differences both in the phonetic cues to word stress and its position in words. Here we focus on word-level stress in Czech, which is formally fixed on the word-initial syllable and might be, reportedly, manifested by an increase in F0 on the second syllable (Skarnitzl & Eriksson 2017); although it remains a question whether Czech word-level stress is phonetically realized at all (Volín & Skarnitzl 2020). Our first aim to was to find out whether Czech word stress is perceptually real: to this end, we investigated whether native Czech listeners invariantly perceive word-initial syllables as stressed. Our second aim was to investigate Czech word-stress perception by Russian listeners in whose native language word-level stress is realized differently. In Russian, stressed vowels are prolonged in duration and unstressed vowels reduced, and the position of word stress is variable (Knyazev & Pozharitskaya 2011). When learning Czech as a second language, native-Russian learners notoriously confuse word stress and vowel length, which is phonemic in Czech (Romaševská & Veroňková 2016).

We designed a perception test in which listeners heard disyllabic and trisyllabic non-existing words consisting of CV syllables that systematically varied in vowel duration and position of the word stress, e.g. [ˈsafa]-[saˈfa]-[ˈxaːka]-[xaːˈkaː] (inspired by Podlipský 2009). Stimulus materials were created from recordings of two native Czech speakers who produced a series of nonce words embedded in phrases. Stimuli in which stress was on the second or third syllable were cut-outs of the respective syllables from two words, for instance [saˈfa] was obtained from the sequence [ˈfa**sa** ˈ**fa**tɛ]. The resulting set of 96 nonce-word stimuli (2 speakers, 12x2 two-syllabic words, 8x3 three-syllabic words) was randomized and presented to listeners in an online foced-choice identification task. At each trial, listeners heard a nonce word and had to indicate which syllable they considered to be stressed by clicking on one of the visually presented strings, see Fig. 1.

In total, 152 native Czech and 33 native Russian listeners participated in the experiment (data collection with Russian listeners is ongoing and expected to be completed by the time of the conference). In stimuli with only one long vowel, the majority of listeners perceptually assigned stress to the phonetically long vowel independently of the actual position of the stress: this was true not only for the Russian listeners (as was expected), but, surprisingly, also for the Czechs, see Fig. 2 and Fig. 3. For stimuli with only short vowels, the responses were less homogeneous and suggested a slight preference for stress assignment to the first syllable in the Czech group. The results of statistical analyses based on complete (to be collected) datasets will be presented at the conference.

The results will help us understand which cues native Czech and Russian speakers rely on to determine the position of word stress. They will advance our understanding of word-level stress in native Czech and will help improve its teaching strategies in a second-language classroom.

Fig. 1. An example of visually presented strings for disyllabic stimuli in the perception test.

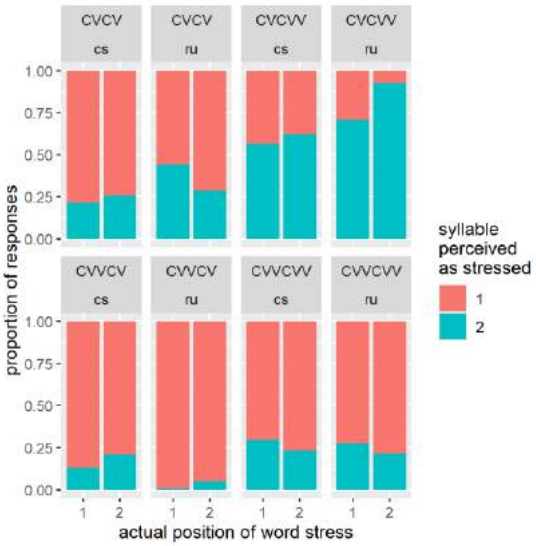

Fig. 2. Czech and Russian listeners' responses on the perceived position of word stress in disyllabic words (VV stands for a long vowel).

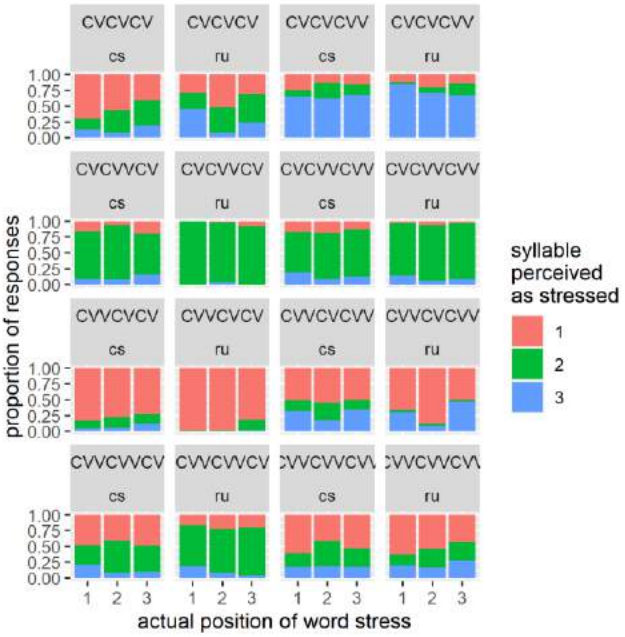

Fig. 3. Czech and Russian listeners' responses on the perceived position of word stress in trisyllabic words (VV stands for a long vowel).

Keywords: speech suprasegmentals; prosody; word-level stress; native and non-native speech perception

References

Knyazev, S. V., Pozharitskaya, S. K. (2011). Современный русский литературный язык: фонетика, орфоэпия, графика и орфография. Moscow: Akademicheskiy proekt, Gaudeamus.

Podlipský, V. J. (2009). The Interaction between Word-Boundary Perception and Vowel Length in Native and Non-Native Speakers of Czech. *ANGLICA III*, 89.

Romaševská, K., Veroňková, J. (2016). Posuzování zvukové stránky řeči ruskojazyčných cizinců rodilými posluchači češtiny. In: Gladkova, H. (2016). *Čeština a ruština v kontaktu: metody a výsledky terénního výzkumu nabývání druhého jazyka u rodilých mluvčích ruštiny v českém prostředí*, 59–83. Prague: FF UK.

Skarnitzl, R. & Eriksson, A. (2017). The acoustics of word stress in Czech as a function of speaking style. In: *Proceedings of Interspeech* 2017, 3221–3225.

Volín, J. & Skarnitzl, R. (2020). Accent-groups vs. stress-groups in Czech clear and conversational speech. In: *Proceedings of Speech Prosody* 2020, 695–699.

Linguistic Typology Points to Language Contact: the case of Ch'orti' (Mayan)

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This paper explores the link between language contact and linguistic typology, using the historical contact between Ch'orti' (Ch'olan Mayan) and Xinkan (non-Mayan) as an illustrative case. Typologies from two types of language contact situations are used: creolization and second language acquisition. Specifically, the study considers the relevancy of linguistic typology in the determination of historical language contact. We know that Ch'orti'-Xinkan contact likely occurred. Xinkan has been documented as causing substratum influence on Ch'orti' in the form of an intransitive incompletive 3rd person prefix ***a-*** (Quizar 2023), and there are many loanwords from the Ch'olan branch of Mayan languages found in Xinkan (Campbell 1972). Beyond that, however, Ch'orti' has undergone numerous changes that set it apart from other Ch'olan languages. While some of these changes might be linked to Xinkan structure, certain changes in Ch'orti' are more likely attributable to natural processes that occur in the language contact situation itself, irrespective of the languages involved. The geographical location of Ch'orti' on the southeastern edge of the Mayan region suggests that Ch'orti' quite possibly experienced contact from additional Central American languages, such as Lenka, Tolpan, Paya, Miskito, and Sumu, all of which have Ch'olan loanwords (Campbell 1976:174-6, 1984:8).

Historical changes in Ch'orti' morpho-syntax conform to three typological traits exhibited by creoles, as described in Daval-Markussen and Bakker (2017). These include the dropping in Ch'orti' of inflectional marking on the verbs, including all aspectual and most status affixes on the verbs. Verb structure has become more serial-like, steering away from complex complementation structures and towards the use of serial finite verbs in complements. Ch'orti' has also moved from its historical Mayan VOS order towards a predominantly SVO order. Other changes in Ch'orti' conform to typological characteristics attributed to the second language acquisition process and to interlanguage, as described by Eckman (2012), Ferguson (1971), Freguson and DeBose (1977), and others. These include the regularization of grammatical rules and the increased analytic expression of grammatical meanings. The speculation here is that the discussed structural changes in Ch'orti' are influenced by the language contact situation, and not by Xinkan specifically. Moreover, while all these changes in Ch'orti' could have happened solely due to internal structural pressures, the absence of these changes in closely related languages suggests that external factors may have played a role. This paper will show how Ch'orti' differs in specific ways from other Ch'olan languages and compare Ch'orti' innovative features to studies of language contact situations, specifically typological traits of creoles and generalizations about second language acquisition processes. The question being raised in this paper is whether we can use typological traits of language contact to suggest the likelihood of

historical language contact in situations like that of Ch'orti'. The Ch'orti' data is from Quizar's fieldwork and published texts; data from other Ch'olan languages is from published sources.

Keywords: language typology, language contact, creolization, historical linguistics, Ch'orti' (Mayan) language

Bibliography:

Campbell, Lyle. 1972. Mayan loan words in Xinca. *International Journal of American Linguistics*, *38*(3), 187–190.

_____. 1976. The linguistic prehistory of the southern Mesoamerican periphery. *Las fronteras de Mesoamerica: XIV Mesa Redonda*, ed. *Sociedad Mexicana de Antropologia*,157-183. Mexico: *La Sociedad*.

_____. 1984. The implications of Mayan historical linguistics for glyphic research. Phoneticism in Mayan Hieroglyphic Writing, ed. John S. Justeson and Lyle Campbell, pp. 1-17. Institute for Mesoamerican Studies, No.9. Albany: State University of New York.

Daval-Markussen, Aymeric, and Peter Bakker. 2017. Typology of creole languages. *Cambridge Handbook of Linguistic Typology*, eds. Alexandra Y. Aiklemvald, et al, Chapter 9, pp.254-286. Cambridge University Press.

Eckman, Fred R. 2012. Linguistic typology and second language acquisition. *The Oxford Book of Linguistic Typology*, ed. Jae Jung Song, Chapter 28, pp.618-633. Oxford University Press.

Ferguson, Charles A. 1971. Absence of copula and the notion of simplicity: A study of normal speech, baby talk, foreigner talk, and pidgins. In D. Hymes, ed., *Pidginization and Creolization of Languages*, pp.141-50. Cambridge University Press.

Ferguson, Charles A., and Charles E. DeBose. 1977. Simplified registers, broken language, and pidginization. In A. Valdman, ed., *Pidgin and Creole Linguistics*, pp.99-125. Bloomington: Indiana University Press.

Goyette, Stéphane. 2000. From Latin to Early Romance: A case of partial creolization? In *Language change and language contact in pidgins and creoles*, J. McWhorter, ed., pp.103-131. Amsterdam: John Benjamins.

Knowles(-Berry), Susan M. 1984. *A Descriptive Grammar of Chontal Maya (San Carlos Dialect).* Unpublished dissertation. New Orleans: Tulane University.

Quizar, Robin. 2023. Xinkan influence on Ch'orti' verbs. *International Journal of American Linguistics*, 89 (2): 255-281.

Robertson, John S., Danny Law, and Robbie A. Haertel. 2010. *Colonial Ch'olti': The Seventeenth-Century Moran Manuscript*. Norman: University of Oklahoma Press.

Sachse, Frauke. 2018. The external relations of Xinkan. *Tiempo detenido, tiempo suficiente: Ensayos y narraciones mesoamericanistas en homenaje a Alfonso Lacadena García-Gallo*, eds H. Kettunnen, et al, 1011-49 Belgium: European Association of Mayanists WAYEB.

Thomason, Sarah Grey, and Terrence Kaufman. 1988. *Language Contact, Creolization, and Genetic Linguistics.* Berkeley; University of California Press.

Vázquez Álvarez, Juan Jesús. 2011. *A grammar of Chol, a Mayan language*. Unpublished dissertation. University of Texas at Austin.

Split inflection on prenominal adjectives

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When adjectives appear in between two nouns in Arabic DPs [N1-A-N2], they display split inflection, agreeing with [N1] in definiteness & case and with [N2] in gender. In this position, however, the adjective fails to inflect for suffixal plural number:

(1) al-awlaad-a al-mashhuur-at-a xaal-aat-u-hum
DEF-boy.M.PL-ACC DEF-famous-F.SG-ACC aunt-F.PL-NOM-their.M
'The boys whose aunts are famous'

The adjective, however, can appear in a plural form if plural is marked infixally:

(2) al-awlaad-a al-tiwaal-a xaal-aat-u-hum
DEF-boy.M.PL-ACC DEF-tall.PL-ACC aunt-F.PL-NOM-their.M
'The boys whose aunts are tall'

It's to be noted that [N2] 'aunts' in this structure has some idiosyncratic features that sets it apart from [N1]. First, while [N1] can appear with a DP-external case, [N2] is invariably nominative. Second, [N2] must carry a resumptive pronoun that agrees with [N1]. Third, while [N1] can be definite or indefinite, [N2] must remain articleless. Crucially though, [N1] & [N2] must encode the same value for (in)definiteness, in spite of the fact that [N2] is always articleless, barring any reading where one noun is definite and the other is indefinite:

(3) al-rajul-a al-kabiir-at-a sayyaar-at-u-hu]
DEF-man.M.SG-ACC DEF-big-F.SG-ACC car-F.SG-NOM-his
'The man with the big car' / *'The man with a big car'

Discussion: The existing analyses of the structure in (1) & (2) (Kremers 2003, Assiri 2011) have escaped any discussion of the variation in number inflection on the adjective. In addition, these analyses don't explain the apparent similarity between the structure in (1) & (2) and the variant structure [N1-N2-A] in (4) where the adjective follows both nouns. In this variant structure, the adjective agrees with [N2] and fails to agree with [N1] in case:

(4) walad-a-n xaal-aat-u-hu mashhuur-aat-u-n
boy.M.SG-ACC-IND aunt-F.PL-NOM-his famous-F.PL-NOM-IND
'A boy whose aunts are famous'

Moreover, the existing analyses don't offer any explanation of the fact that [N1] in (4) must remain indefinite. There are, however, two contexts in which [N1] can be definite. The first context is when [N1] is followed be a definite adjective, deriving (1) & (2):

(5) al-awlaad-a al-mashhuur-at-a xaal-aat-u-hum
DEF-boy.M.PL-ACC DEF-famous-F.SG-ACC aunt-F.PL-NOM-their.M
'The boys whose aunts are famous'

The second context is when [N1] is followed by a relative marker (RM):

(6) al-awlaad-a allathiina xaal-aat-u-hum mashhuur-aat-u-n
DEF-boy.M.PL-ACC RM aunt-F.PL-NOM-their.M famous-F.PL-NOM-IND
'The boys whose aunts are famous'

It's to be noted that there is a complementary distribution between the definite adjective and the relative marker. The occurrence of either, though, is contingent on the presence of the definite article on [N1].

Analysis: I propose that (5) & (6) are both built upon a clausal predication structure. Crucially, the subject of predication is the Construct State noun phrase (CS) in (7) which is formed through the annexation of two nouns to express a genitive relationship:

(7) xaal-aat-u al-awlaad-i
aunt-F.PL-NOM DEF-boy.M.PL-GEN
'The aunts of the boys'

This assumption is motivated by several empirical observations. First, the thematic relation between the two nouns in (5) & (6) indicate a possessive relation which is typically expressed using a CS structure. Second, [N2] in (5) & (6) is invariably articleless and resembles the form of the first noun in (7) which must remain articleless as well. Third, the obligatory agreement between [N1] and the resumptive pronoun on [N2] in (5) & (6) remains a puzzle under any analysis that base-generates these two nouns in different positions since nouns do not typically agree with each other in this language. Under this analysis, the restriction on (in)definiteness readings in (3) receives a straightforward explanation since the first noun in (7) is unspecified for (in)definiteness and must inherit this feature from the second noun (Ritter 1991). As a result, the two nouns in a CS phrase must always encode the same value for (in)definiteness. Thus, I propose that (5) & (6) are built upon the following predication structure:

(8) xaal-aat-u al-awlaad-i mashhuur-aat-u-n
aunt-F.PL-NOM DEF-boy.M.PL-GEN famous-F.PL-NOM-IND
'The aunts of the boys are famous'

The derivation of (5) & (6) proceeds as follows: upon the merge of a relative head relC above the predication structure in (8), the noun 'boys' is relativised and raised to spec-relCP, leaving a resumptive pronoun in its gap (see Kayne 1994, De Vries 2002). The relativisation of 'aunts' is not possible since it's unspecified for (in)definiteness. Crucially, the relative head bears a [DEF] feature that needs to be checked. There are two strategies to do that: (i) to invert the predicative adjective as in (5), or (ii) to insert a relative marker as in (6). When the head noun 'boys' is indefinite, the definite article on the adjective in (5) as well as the relative marker in (6) must be dropped, deriving the two indefinite variants below, respectively:

(9) awlaad-a-n mashhuur-at-a-n xaal-aat-u-hum
boy.M.PL-ACC-IND famous-F.SG-ACC-IND aunt-F.PL-NOM-their.M
'Boys whose aunts are famous'

(10) awlaad-a-n xaal-aat-u-hum mashhuur-aat-u-n
boy.M.PL-ACC-IND aunt-F.PL-NOM-their.M famous-F.PL-NOM-IND
'Boys whose aunts are famous'

In (9), the adjective agrees in number & gender with its subject [N2] in-situ; and after inversion, definiteness and case on relC & [N1] become accessible to the adjective, deriving split agreement. In (10), a relative marker is inserted initially, barring predicate inversion. The subsequent omission of the relative marker is triggered by indefiniteness on 'boys'. In this context, definiteness and case on the adjective receive default values, as a last resort.

Residual case systems in Aromanian (southern Albania): descriptive and theoretical aspects

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1. Introduction. The residual occurrence of the case morphology in Aromanian reveals a connection with nominal definiteness, number, and person, providing a test bench for the nature of the case and its role in syntax. Aromanian varieties, investigated through field research in southern Albania, have been influenced by a long-standing contact with Albanian, which led to both phenomena of borrowing and, what we are interested in, facts of attrition and reduction. Our ai is to describe and analyze Aromanian case patterns, which show a very restricted occurrence linked to particular contexts, in a frame of micro-variation. **2. Case system.** Unlike the case system of Romanian, including the direct case, for the subject and object, and the indirect case, for the beneficiary and other oblique contexts (Dobrovie-Sorin, Giurgea 2013, Pană Dindelegan 2016), Aromanian maintains a reduced paradigm of enclitic definiteness elements, in (1a,b) (cf. Caragiu Marioţeanu 1975, 2006, Poçi 2009), which separates the direct, (1a), and oblique morphology, (1b), in plural definite nouns, as shown by (2a) and (2b).

(1) a.	msg	fsg	mpl	fp	b.	msg	fsg	mpl	fpl
Nom/Acc	-u	-a	(Pal/ʎ)-i	-l-i	*Dat/Gen*	-u	-i	-ʎ-u/(Pal)u-r-u	-r-u/l-u

(2) a. Arə	vənit / am	vədzut	fitʃor-ʎi/ məʎer-li
Have.3PL	come /have.1SG	seen	boy- / women- DEFPL
‘They have come /I.have seen the boys/the women’			

b. i	o	ded	o	fitʃor-ʎ-u/o	məʎer-l-u
DAT	it	give.PAST	PI	boy- /woman	PL-OBL
‘I gave it to the boys/ the women’					

Pronouns distinguish Nom/Acc *mini/tini/eu/ia/eʎ/eli/noi/ voi*, and oblique *a ɲia/a tsea/a ɣui/jei/a ɣorə/a noi/a voi*, OCls separate accusative and dative. **3. The PI.** The Oblique is selected by the PI (Possessive Introducer) *o/a*, which, while recalling linkers, however, agrees with the possessor as illustrated in (3a) for the masculine and plural, and (3b) for the feminine (Manzini, Savoia 2018, Baldi, Savoia 2021). In the contexts introduced by a locative expression, the PI with the oblique in (4a), alternates with the preposition *di/ti* which select the direct form of the noun, in (4b) (Savoia et al. 2020):

(3) a. sɔr-a o ɣu-i /ɣ-ɔrə
sister.DEF.FSG PI him-OBL/them-PL.OBL
‘his/their sister’

b. sɔr-a a je-i
sister.DEF.FSG PI her-OBL
‘her sister’

(4) a. dəninti o fitʃor-ʎ-u
before PI boy-PL-OBL
‘before the boys’

b. də ɟɔs di fitʃor-ʎ-i
under of boy-PL-DEF
‘before the boys’

4. Some hypotheses. We know that the case feature, a classic category of the cartographic model, has a spurious status; it is no accident that Chomsky (2021:16) concludes that ‘Case doesn’t enter into semantic interpretation’ and is part of externalization. In this light, the case can be identified with a cluster of nominal features, such as number, gender, and definiteness. If, as we assume, the morphology is part of the syntactic computation, sub-word elements (root and affixes), endowed with interpretable content (Manzini, Savoia 2017, Collins, Kaye 2020), are combined by Merge in the procedure of amalgamation (Chomsky 2021), including exponents referring to case properties (Baldi, Savoia 2022). Based on Chierchia (1998), plurality can be thought as the sub-set relation, corresponding to the inclusion operator [⊂]. Following Belvin, den Dikken (1997), writing on ‘have’, we take the relevant characterization of possession to be an ‘inclusion’ one and assign this property to the preposition *di/of* and the oblique, genitive/dative case (Manzini, Savoia 2011, Savoia et al. 2019). The semantic link

between plurality and the oblique operator can explain the preservation of the oblique in the plural, insofar as the oblique exponent, e.g. *–u*, contributes to specifying the sub-set reading in relation to an expressed possessee, the head noun. This matches with the fact that the occurrence of the oblique is incorporated within the context *PI + oblique*, substantially a specialized morpho-syntactic mapping of sub-set relation. In this context, the PI registers agreement features while the inclusion operator is expressed by the oblique form, preserved with plural nouns or singular and plural pronouns. **5. Merge.** In (5) Merge yields the inflected noun, (5i), and the oblique construct, (5ii), where the oblique exponent is the agreement selected by the PI.

(5) i. $< [_R$ bərbats], -uru$_{\subseteq} >$ → $[_{\subseteq,M}$ [bərbats]-uru]

ii. $< [$ o$_{\subseteq}$, $[_{\subseteq,M}$ [bərbats]-uru] > → $[_{PI}$ o$_{\subseteq}$ $[_{\subseteq,M}$ [bərbats]-uru]]

The inflected noun N is able to realize the interpretive properties of D, (6), within the DP.

(6)

P/PI	D_{φ}	N
o$_{\varphi/\supseteq}$		bərbats-uru $_{\varphi/\supseteq,M}$

If D realizes case and definiteness in DPs, the complementary distribution in (7) appears, confirming that what we define as the case is part of the same set of referential features associated with nouns (Manzini et al. 2020, Savoia et al. 2019).

(7) i o m dat o ts-uor omɲ-i / o omɲ-i-ʎ-u
DAT3PS it have.1SG given PI that-OBL.PL man-PL / PI man-PL-OBL
'I have given it to those men / to men'

The nature of D was the object of several proposals (cf. Giusti in press), encompassing, among others, the idea that D is the head endowed of the case feature K. Definiteness seems to be a prototypical property of D. As highlighted, the reduction of the case to referential features of nouns in addition to accounting for many syncretism facts, it accords with a syntax without head-raising. **6. Conclusion**. Our morpho-syntactic approach, based on fully interpretable elements and excluding Late Insertion, allows bringing to light the relation between case, definiteness, and number (plural), as in the contexts of PI. We will adopt this framework to investigate the preposition contexts, the difference between nouns and pronouns in the case paradigm, and the realization of the possession relation.

Keywords: case; Merge; SMT, Aromanian.

Selected References

Baldi B., L.M. Savoia. 2021. Possessives in Aromanian. A comparison with Albanian and North-Calabrian dialects, *Revue Roumaine de Linguistique*, LXVI, 2-3: 99-131.

Caragiu Marioţeanu, M. 2006. *Aromânii şi aromâna în conştiinţa contemporană*, Bucuresti, Editura Academiei Române.

Chierchia, G. 1998. Partitives, reference to kinds and semantic variation. In A. Lawson (ed.), *Proceedings of Semantics and Linguistic Theory*, VII. 73–98. CLC Publications, Ithaca.

Chomsky, N. 2021, Minimalism: Where Are We Now, and Where Can We Hope to Go*, *Gengo Kenkyu* 160:, 1-41

Dobrovie-Sorin, C., I. Giurgea (eds.), 2013. *A Reference Grammar of Romanian, Volume 1: The Noun Phrase*, Amsterdam: John Benjamins.

Giusti, G. Forthcoming, *Arguments for the universality of D and determiners*.

Manzini M. R., L. M. Savoia, 2017. Case in the nominal and pronominal systems in Aromanian: oblique case and its interactions with the person split. *Revue Roumaine de Linguistique*, LXII: 115-142.

Poçi, S., 2009, *Vllehtë. Historia dhe gjuha e tyrë*, Tiranë, Botimet Toena

Savoia L.M., B. Baldi, M. R. Manzini. 2020. Prepositions in Aromanian. *Studii si Cercetari Lingvistice*, LXXI: 149-160.

Savoia L. M., B. Baldi, M. R. Manzini, 2019. Asymmetries in Plural Agreement in DPs. In J. Emonds, et al. (Eds.), *Language Use and Linguistic Structure*: 204-224, Olomouc: Palacký University Olomouc.

He who seeks finds: a nanosyntactic view on activity-entailments of culminations

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Background

There is a widespread view that some achievements (to win, to find) are in some way related to activities (to compete, to search). This relation is traditionally identified as presupposition (Martin), (Malink). I present a novel perspective on this phenomenon, building on a decomposed VP (Ramchand) and the Nanosyntax model of spellout (Starke). Focusing on the verbs 'to find' and 'to search', I argue for a structural containment relation between culminations and activities. The resultative is argued to be a suppletive form of the corresponding activity.

Data: overt containment

First, I will present data on the Russian verb *iskat'* ('to search') and its prefixal counterpart *ot-iskat'* ('to find'). *Ot-iskat*' (telic verb) is clearly a derivative of *iskat'* (atelic verb)[1]. Adopting the framework of (Ramchand), the first verb spells out initP and procP. The next verb spells out initP, procP and resP. The figure (1) shows that the structure for *iskat'* is properly contained in the structure for *otiskat'*.

Extending the analysis

The data surveyed so far consisted of the verbs that share phonological material. However, if one uses a nanosyntactic view on suppletion (Vanden Wyngaerd, De Clercq, and Caha), the present analysis may be extended to the verbs 'find' which are not derivatives of the verbs 'search' (such as English find - search pair). In addition to the Russian verb *ot-iskat'*, there is another verb *nayti*, which also means 'to find'. Despite being unrelated to each other, *nayti* can be treated as a suppletive form of *iskat'*, with the suppletion trigger being the resP projection. This is shown in the figure (2).

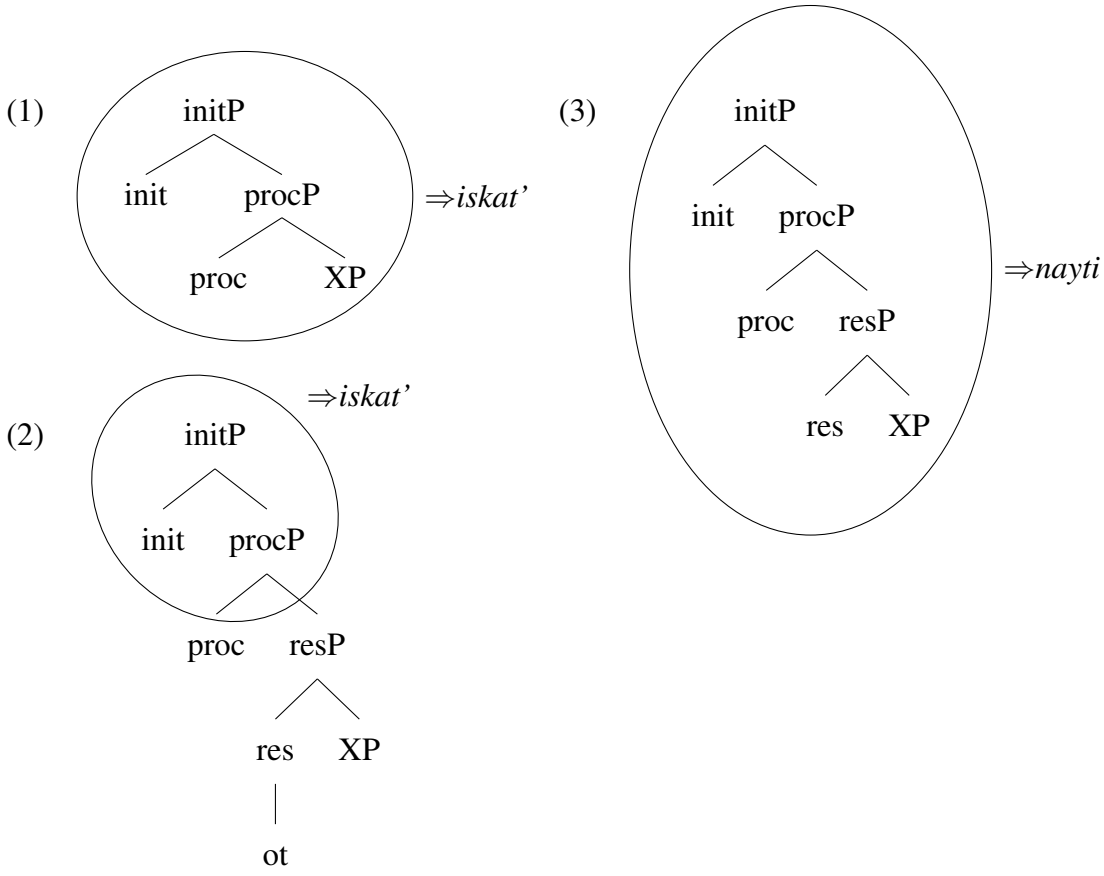
To find accidentally vs. to find on purpose

It is necessary to note that not all occurrences of the verb 'to find' imply the preceding event of searching (Gyarmathy), as it is possible to find something by accident. This distinction is captured by the different sizes of L-trees for two meanings of 'find': the 'find accidentally' verbs spell out the resP and procP projections only (as they do not imply the existence of preceding event), meanwhile the 'find on purpose' verbs spell out initP, procP and resP. This analysis may be illustrated by Khwarshi data, where 'to find on purpose' (*us-x*) is the causative form of 'to find by accident' (*us*) (Maisak and Daniel).

Implications

This analysis has a range of consequences for morphological theory as well as semantics. First, it models some instances of 'entailment' in the syntactic structure. Next, it extends the contexts where suppletion is usually used: namely, from inflectional morphology (say, suppletive plurals) to derivational morphology.

[1]The same evidence for 'to find' being a derivative of 'to search' can be found in Chinese (Kholkina, Naniy, and Chan), where *zhǎo-dào* ('to find') is derived from *zhǎo* ('to search'), with *dào* being a resultative affix.



Keywords: Nanosyntax; culminations; event structure; suppletion; to find

References

Gyarmathy, Zsófia. "Culminations and presuppositions". *Proceedings of the 20th Amsterdam Colloquium* (2015): 167–177.

Kholkina, L.S., L.O. Naniy, and C. Chan. "Semanticheskoje pole iskat'-naxodit' v kitajskom jazyke[Semantic field search-find in Chinese language]". In *EVRika! Sbornik statej o poiskax i naxodkax k jubileju E.V. Raxilinoj*. Labirint, 2018.

Maisak, Timur, and Michael Daniel. "Chornaya koshka grammaticalizatsii: konstruktsii s glagolom 'najti' v dagestanskix jazykax [The black cat of grammaticalization: constructions with 'find' verb in the languages of Daghestan]". In *EVRika! Sbornik statej o poiskax i naxodkax k jubileju E.V. Raxilinoj*. Labirint, 2018.

Malink, Marko. "Right Boundary Achievements under Conative Negation". In *Language, Context and Cognition*. Walter de Gruyter, 2008. https://doi.org/10.1515/9783110209303.2.145.

Martin, Fabienne. "Revisiting the distinction between accomplishments and achievements". In *From now to eternity*, 43–64. Brill, 2011. https://doi.org/10.1163/9789042032682_004.

Ramchand, Gillian Catriona. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge Studies in Linguistics. Cambridge University Press, 2008. https://doi.org/10.1017/CBO9780511486319.

Starke, Michal. "Nanosyntax: A short primer to a new approach to language". *Nordlyd* 36, no. 1 (2009): pp. https://doi.org/10.7557/12.213.

Vanden Wyngaerd, Guido, Karen De Clercq, and Pavel Caha. "Late Insertion and Root Suppletion". *ReVEL, edição especial,* 19, no. 18 (2021).

Preschool EFL learners' recognition and production of English front vowels

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The learning of L2-English sounds by non-immersion learners is often researched with *literate* persons (see refs. in [1]). Studies with preschoolers are scarce despite the popularity of English courses for very young children, stemming from the commonly held belief that an early start improves the chances of a higher attainment in a foreign language (e.g. [2]).

We explored the recognition and production of English /i, ɪ, ɛ, æ/ by 7 Moravian-Czech preschoolers (aged 3;9-5;8) attending weekly EFL classes (45-min exposure to SSBE) for at least 10 months. We asked: (1) Could the learners reliably recognize the L2 vowels in familiar words? (2) In production, did the learners differentiate spectrally the difficult L2 vowel /æ/ [3] from the closest sounds /ɛ/ and /ʌ/, and the L2 vowel /ɪ/ from /i/ and /ɛ/? (3) Did their production change over time? The learners' productions were compared to those by 8 native English children (3-6 yrs old) in spontaneous conversations with their mothers [5-13].

During 3 months, 2 sessions tested V recognition and 6 V production. In a recognition session, each child heard 12 familiar concrete words: *10 targets* which in SSBE have non-high /æ/ or /ɛ/ (3 words each) and high /ɪ/ or /i/ (2 words each), and *2 fillers* (with /u/ and /ɑ/). For each vowel, one of the target words was pronounced correctly, the other(s) were mispronounced, i.e. the vowel was 'raised' (e.g. /kæt/ → [kɛt]) or 'lowered/retracted' (e.g. /bɛd/ → [bæd], /bæk/ → [bʌk]). Simultaneously, the child saw a picture of an object and was to say "yes" when the picture matched the uttered form and "no" when it did not. The procedure was trained prior to data collecting. In the production sessions, the children produced 38 English mono-/di-syllabic words containing /i, ɪ, ɛ, æ, ʌ/ in a picture-naming task. The remaining English monophthongs occurred in fillers.

Fig. 1 shows the percentages of correct responses on the V replacement recognition task. A mixed-effects logistic regression model revealed an effect of replacement type ('none', when responses were mostly correct, vs 'lowering' and 'raising', with responses at chance) but no reliable differences between Vs. Fig. 2 shows V space plots with the means and 68% ellipses for each V across speakers and words for the production data. Normalized vowel height, F1-F0, and retraction, F2-F0, (all in ERB) were modelled by two linear mixed-effects models for the learner data and by two additional models comparing the learners' productions in the later sessions (half 2) with those by the native speakers. The analyses showed that in half 1 all learner Vs differed in height and retraction, even /ɛ/-/æ/ (which are typically merged in later Czech learners [4]), though as seen in Fig. 2 (left) there was an overlap between their spectral qualities. The only reliable shift between halves was the raising of /ʌ/ (see Fig. 2, middle). The native-speaker Vs were not found to differ in retraction from the learners' half 2, but their /æ/ was lower and more separated in height from /ɛ/ than for the learners.

In sum, although Czech preschooler EFL learners were only at chance in noticing when the L2 Vs were replaced by a neighbouring V, they differentiated the L2 Vs /ɛ/-/æ/-/ʌ/ and /i/-/ɪ/ spectrally in production to some extent, suggesting that the learners were establishing new vocalic categories in response to limited but sustained early exposure to L2 speech.

Keywords: English as a foreign language; front vowels; child learners

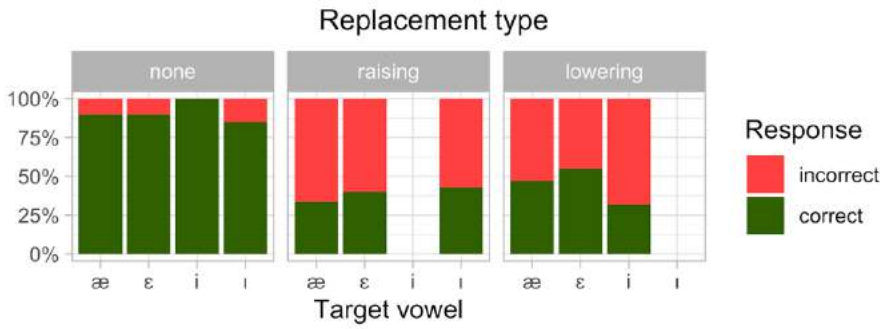

Figure 1: Percentages of correct responses on the vowel replacement recognition task pool across participants and words and split by target vowel and replacement type.

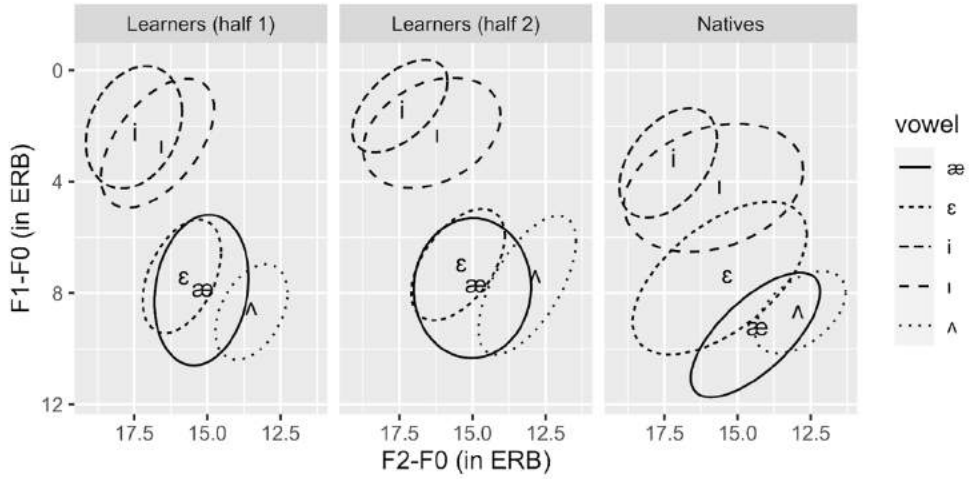

Figure 2: V space plots showing the mean height and retraction and 68% ellipses across speakers and words split by speaker group, testing time and vowel.

References

[1] Moyer, A. (2013). *Foreign accent: The phenomenon of non-native speech*. CUP.

[2] Doláková, S. (2019). *Angličtina: Proč je důležité začít včas?* [English: why it's important to start early]. Retrieved January 31, 2023, from http://www.sylviad.cz/Publication.html

[3] Šturm, P., & Skarnitzl, R. (2011). The open front vowel /æ/ in the production and perception of Czech students of English. In *Proc. of Interspeech 2011, Florence*, 1161-1164.

[4] Šimáčková & Podlipský (2018). Production accuracy of L2 vowels: Phonological parsimony and phonetic flexibility. *Research in Language*, *16*(2), 169-191.

YouTube videos, "Interview with my x-year old":

[5] https://www.youtube.com/watch?v=4xA5F_0s9jA

[6] https://www.youtube.com/watch?v=07_-5zKI8xk

[7] https://www.youtube.com/watch?v=Rw2W2R0K4jM

[8] https://www.youtube.com/watch?v=kmNOEJzY9KE

[9] https://www.youtube.com/watch?v=DcAyfxRweUI

[10] https://www.youtube.com/watch?v=eVvdaohFkQ0

[11] https://www.youtube.com/watch?v=QZpR-RRiBUE

[12] https://www.youtube.com/watch?v=CS4lICRPMdk

Dovyko: a Diagnostic Tool to Assess Early Communicative Development

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Dovyko (*Dotazník vývoje komunikace*) is the Czech adaptation of the MacArthur-Bates Communicative Development Inventories (CDI) used to assess communicative development in children aged 8 to 30 months. The CDI was originally developed for American English and has been adapted to over 100 languages (Fenson et al., 2008; Jarůšková et al., forthcoming). Its Czech adaptation has two versions: the currently developed Dovyko I for infants from 8 to 18 months, assessing receptive and productive vocabulary and communicative gestures, and Dovyko II (adapted to Czech by Smolík et al., 2017) for toddlers from 16 to 30 months, assessing productive vocabulary and grammar. We report on the development and standardization of Dovyko I, the development of new norms for Dovyko II, and the validation and reliability assessment of both tools.

The presented standardization study is based on data from over 1000 caregivers for each instrument, Dovyko I and Dovyko II. The reliability of the adapted tool was assessed as test-retest reliability (comparing data from the same respondent collected at two time points, approx. three weeks apart, currently n = 63) and inter-rater reliability (comparing data from two caregivers of the same child, currently n = 173).

The validity of the instrument was tested in a looking-while-listening experiment with an eye-tracker (Fernald et al., 2008). A word comprehension task was administered to 214 children across four age groups. Forty-nine 11–13-month-olds got a 40-item task, 47 15–17-month-olds and 49 18–20-month-olds received a 60-item task, and 47 24–30-month-olds an 80-item task. At each experimental trial, the children saw a pair of pictures and heard a target noun embedded in a short carrier sentence such as "Podívej, tady je **stůl**!" ("Look, there's a **table**!"). We evaluated the average change in the proportion of looks towards the target picture in a 2-second interval starting 700 ms after the word onset, as well as the change in the proportion of looks to the target across time. For the oldest group, the correlation between the Dovyko score and the proportion of looks in the 2-second period was r = .53 (see Figure 1, left panel). As for the trajectory of looks across time, children with higher Dovyko scores showed a faster and more robust orientation towards the target (see Figure 1, right panel). There was an effect of age, with the correlations between the Dovyko scores and the experimental results being weaker in younger children.

The present results confirm that Dovyko is a valid tool for assessing early communicative development. The availability of a large sample will allow for detailed

documentation of the tool's reliability and will provide robust norms for each month of age.

Keywords: CDI; early L1 development; diagnostic tool; eye-tracker.

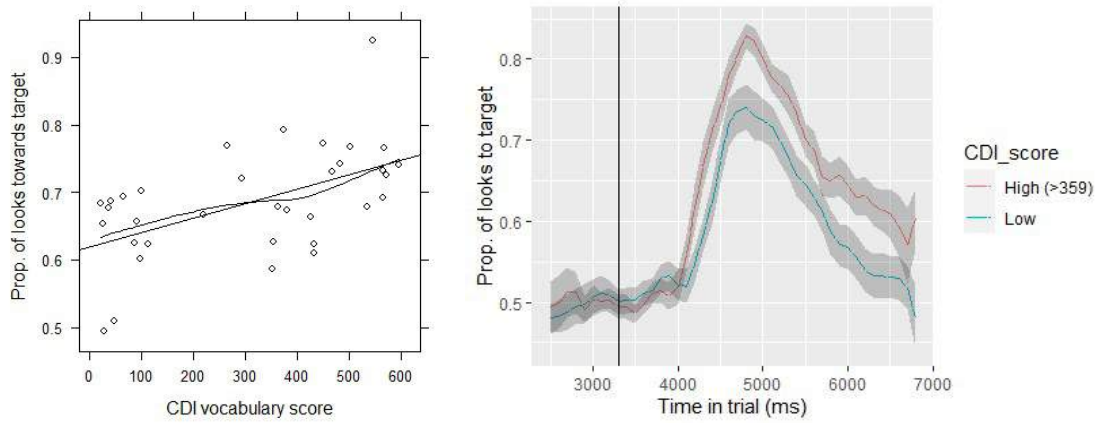

Figure 1. Left panel: Average proportion of looks to the target picture in a 2-second interval after the target-word onset and its relation to the CDI score in 24–26-month-olds. Right panel: proportion of looks to the target across time separately for children with CDI score above median and for children below median (vertical line: word onset).

References

Fenson, Larry, Virginia A. Marchman, Donna J. Thal, Philip S. Dale, J. Steven Reznick, and Elizabeth Bates. 2008. *The MacArthur-Bates Communicative Development Inventories User's Guide and Technical Manual, Second Edition*. Baltimore: Paul H. Brookes Publishing Company.

Fernald, Anne, Renate Zangl, Ana Luz Portillo, and Virginia A. Marchman. 2008. "Looking while listening: Using eye movements to monitor spoken language." In *Developmental Psycholinguistics: On-Line Methods in Children's Language Processing*, ed. by Irina A. Sekerina, Eva M. Fernández, and Harald Clahsen, 113–132. Amsterdam: John Benjamins Publishing Company.

Jarůšková, Lucie, Filip Smolík, Kateřina Chládková, Zuzana Oceláková, and Nikola Paillereau. Forthcoming. "How to build a CDI: Insights from 43 adaptations." *Journal of Speech, Language, and Hearing Research*.

Smolík, Filip, Jaroslava Turková, Klára Marušincová, and Veronika Malechová. 2017. *Dotazník vývoje komunikace II. Dovyko II. Dotazník pro diagnostiku jazykového vývoje ve věkovém rozmezí 16 až 30 měsíců. Příručka a normy.* Praha: Univerzita Karlova, Filozofická fakulta.

Frequency and imageability in speeded inflectional production of Czech children and adults

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One of the longstanding discussions in adult and child psycholinguistics concerns the mental representation of morphologically inflected words. It is unclear whether the use of inflected forms activates an abstract lemma node and the specific form is generated by morphological rules, or whether the form is accessed directly from memory. One way to address the question are the effects of lemma and form frequency (e. g. Baayen et al., 1997): if the inflected forms are accessed directly, the frequency of the inflected form should be the best predictor of its use. If each inflected form activates the lemma, the processing times should be influenced mainly by the frequency of all forms of the word, i. e. lemma frequency. In addition to frequencies, it has been argued that the effects of word imageability on generating inflected forms should only occur when the inflections are accessed directly from memory (Butler et al., 2012; Prado, Ullman, 2009).

The present study examined the representation of inflected noun forms in Czech focusing on the effects of lemma and form frequency, as well as imageability. We used the speeded inflectional production paradigm (Clahsen et al., 2004), showing the participants nouns in the nominative form and asking them to produce the genitive form (Say the word as if it were after the preposition "bez" ....). The stimuli were 140 nouns; 70 of them underwent stem change in the inflected form (vowel change or deletion - nom. dům, vědec, gen. domu, vědce); 70 did not. The two noun types were matched in lemma and form frequency, as well as length. Thirty-seven children aged 8 to 11 (grade 3-4), as well as 28 adults participated. Here we analyze the latency between the onset of the noun presentation and the onset of the verbal response.

Mixed-model regression revealed production latency was longer in nouns with stem change for both adults and children. Also for both groups, the effects of lemma and genitive form frequency were comparable and none went above and beyond the other. Imageability effects approached significance in adults, and were significant in children. In addition, children showed stronger effects of imageability in nouns undergoing stem change (see Figure 1). Overall, the results indicate that inflection with stem change is a costly process for the inflectional system but adults appear to access the lemma when generating a specific inflected form. Effects of imageability in children suggest that they may rely on whole-form representation in stem-change nouns, but not in nouns that only add endings. The pattern is consistent with the view that children initially rely on memory representation of complete forms in complex inflected forms but use rules for simply formed inflections. Adults appear to use rules for all types of words.

Keywords: morphology; psycholinguistics; inflection; imageability

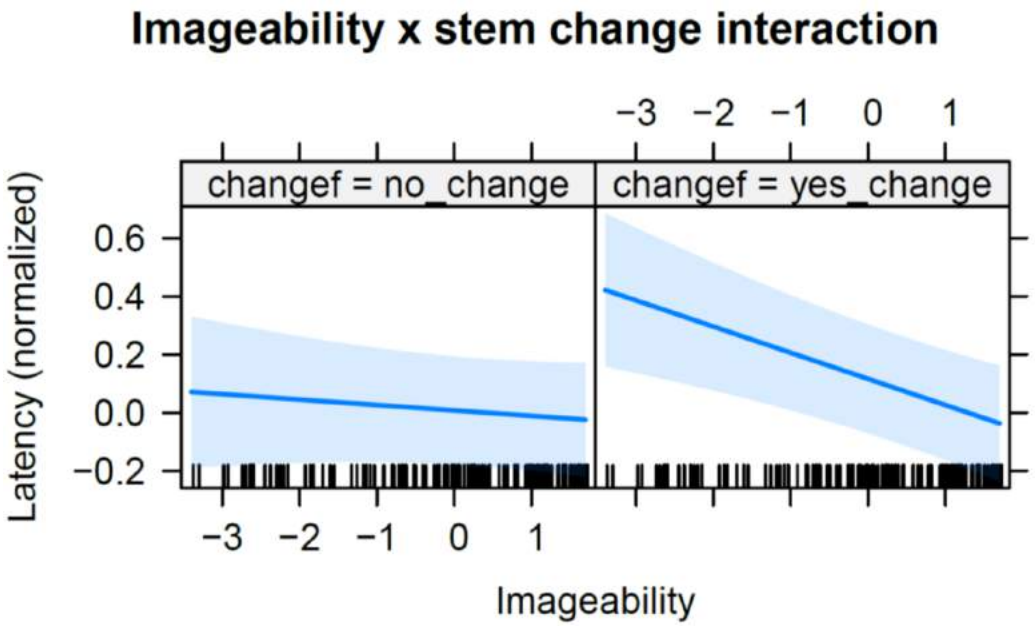

Figure 1
Effects of imageability in children: relation between imageability and the the production of inflected forms in no-change nouns (blok-bloku) and nouns with stem change (dům-domu).

References

Baayen, R. H., Dijkstra, T., & Schreuder, R. (1997). Singulars and plurals in Dutch: Evidence for a parallel dual-route model. Journal of memory and language, 37(1), 94-117.

Butler, R., Patterson, K., & Woollams, A. M. (2012). In search of meaning: Semantic effects on past-tense inflection. Quarterly Journal of Experimental Psychology, 65(8), 1633-1656.

Clahsen, H., Hadler, M., & Weyerts, H. (2004). Speeded production of inflected words in children and adults. Journal of child language, 31(3), 683-712.

Prado, E. L., & Ullman, M. T. (2009). Can imageability help us draw the line between storage and composition?. Journal of Experimental Psychology: Learning, Memory, and Cognition, 35(4), 849.

A scalar vector model of argument structure representation

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One of the problems with statistical approaches to natural language is the lack of explanatory adequacy: the descriptive tools are not easily associated with linguistically relevant questions. In our talk we propose a statistics-based account of argument structure and raise questions that are central in theories of grammar as well.

The lexical description of argument structure provides information on the properties of the combination capacity of lexical items. Argument structure identification is a fundamental task both in theoretical linguistics and natural language processing.

To avoid the randomness of manual identification, argument structures should come from corpus data by automated processes. However, there is a lot of noise in corpus data making it challenging to distinguish obligatory constituents and adjuncts: in data such as example (1) it can be difficult for an automatic tool to decide if a constituent is obligatory (*egy könyvet* 'a book', *Marira* 'to Mary') or not (*tegnap* 'yesterday'), or whether it gets a thematic role from the predicate at all (*a demokráciáról* 'about democracy'), furthermore, obligatory constituents do not always appear in the sentence (pro drop subject, implicit arguments, etc.). While these can be easier to decide for a particular sentence for a human analyst, an automatic data processing system cannot do this as straightforwardly; it can only determine which constituents appear in the actual sentence.

(1) Hungarian

Tegnap	*pro* egy	könyv-et	bíz-t-am	Mari-ra	a	demokráciá-ról
yesterday	a	book-ACC	trust-PAST-1SG	Mari-SUB	a	democracy-DEL

'I entrusted a book about democracy to Mary yesterday.'

Our proposal is a new way to describe argument structure, one that does not distinguish sharply between obligatory constituents (arguments) and non-obligatory ones (adjuncts). Instead of the binary opposition of arguments and adjuncts, we propose an extended notion of argumenthood suggesting that (obligatory or not obligatory, and even non-thematic) arguments should be characterized by a scalar value between 0 and 1, based on the probability of the appearance of these constituents, classified by their typical properties, such as their case form. So instead of the binary vector ⟨NOM, ACC, SUB⟩, we use scalar vectors to describe the different argument structure realisations of the different verbs, e.g. the verb *bízik* 'trust' as $\boldsymbol{v}$ **= [0.41, 0.42, 0.58, 0.28, 0.15, ...]**, where the scalar values are based on the frequency of the nominative, accusative, inessive, sublative, delative etc. constituents associated with the verb.

However, the scalar argument structure vector cannot be derived directly from the corpus if the verb has other argument structures too (probably with a meaning different from example (1), cf. *Bíztam Mariban* trust.PAST.1SG Mary.INE 'I trusted Mary', see $\boldsymbol{v_3}$ in Fig 1.); it is only

the cumulated $\boldsymbol{v}$ vector for all the argument structure variants of the verb that appear in the corpus that can be retrieved. This cumulated vector can be considered as the weighted sum of the $\boldsymbol{v}_i$ vector of the variants, where the weights are based on the frequency of the variants in the corpus, but neither these $\boldsymbol{v}_i$ vectors, nor the weights are directly accessible from the corpus.

In our talk we present an optimization method based on the hill climbing algorithm (Russell–Norvig 2010: 122) to determine all the $\boldsymbol{v}_i$ vectors of the variants and their weights. This algorithm determines three variants of the verb *bízik* 'trust' as shown in Fig 1. resulting from previous automatic data processing. The columns represent the different variants, their horizontal positions showing their frequency in the corpus, with the vertical patches belonging to the different constituents the verb appears together with and their frequency. With the help of scalar argument structure vectors the three different lexical realizations of the verb *bízik* 'trust' can be unequivocally identified.

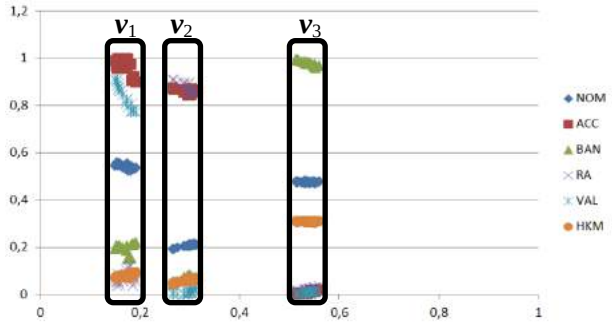

Figure 1. Argument structure vectors of the verb *bízik* 'trust' determined by the hill climbing algorithm: $\boldsymbol{v}_1$ 'sb commissions sb to do sg'; $\boldsymbol{v}_2$ 'sb entrusts sg to sb'; $\boldsymbol{v}_3$ 'sb trusts sg'

Scalar argument structure vectors turn out to be a highly versatile descriptive tool in theories of grammar and natural language processing. Among others they can be used for the following:

- detecting related predicates undergoing argument structure changing operations based on systematic differences between their vectors;
- identifying semantic classes of predicates based on the similarity of their vectors;
- identifying idioms based on the higher frequency of certain lexical items;
- characterization and reconstruction of pro-drop and ellipsis phenomena;
- distinguishing obligatory arguments (>0.6) and adjuncts (<0.4);
- document classification: different types of corpora have different distributions of vectors.

Keywords: argument structure; argument–adjunct distinction; vector representation; corpus analysis; Hungarian

Reference

Russell, Stuart J., and Peter Norvig. 2010. *Artificial Intelligence: A Modern Approach*. Prentice Hall.

Identifying non-compositional verbal complexes in Hungarian
A corpus-based approach

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The aim of our talk is to give a corpus-based computational linguistic account of compositionality based on changes in argument structure in Hungarian preverb-V verbal complexes. Frege's Compositionality Principle states (Gendler Szabó 2000; Partee 2004) the following:

(1) The meaning of a syntactically complex expression is determined only by the meaning of its syntactic parts and the way the individual parts are combined.

In natural language there are also non-compositional expressions. In order to extend the scope of the Compositionality Principle to these idiomatic expressions we have to assume that they are individual lexical items (*hot dog*). The other way to explain non-compositionality is to say that they are complex expressions, but their syntactic structures are unique. So unique that it does not specify the syntactic properties of its parts only but their phonetic forms as well. Furthermore, the meaning of the complex may be determined by the construction only, not considering the meanings of all of its constituent parts, as in the expression *apple of someone's eye*. In this case the head of the construction may select the other constituents of the construction by lexical selection, specifying their forms, and the meaning of the whole construction. The head of the construction has at least two different lexical descriptions, one for its compositional use, the other one for this non-compositional use. The distinction between compositional and idiomatic expressions is based on their unique or systematic semantic behaviour.

Identifying non-compositional expressions is not an easy task since their meaning and lexical representation are not accessible without human interpretation. Automatic corpus-based idiom detection can only rely on the form and frequency of words in the corpus. However, it is not only the meaning of idiomatic expressions that is unique, but their other grammatical properties as well. We propose a more general, asemantic definition of Compositionality:

(2) The grammatical properties of a syntactically complex expression are determined only by the grammatical properties of its syntactic parts and the way the individual parts are combined.

This interpretation of compositionality can uncover the second type of non-compositional constructions mentioned by Fillmore et al. (1988): *familiar pieces unfamiliarly arranged*.

In our paper, we show how to identify idiomatic expressions focusing on a specific property, the verbal argument structure. This is a purely syntactic property, as required by the asemantic compositionality definition. In the case of Hungarian verbs modified by preverbs

(VM), we assume that the preverbal component systematically affects the argument structure of the verb in general: with the preverb *be* 'into', the probability of the appearance of a goal argument in the sentence increases: if a *V* verb can take an illative DP with a probability p_{ILL}, the probability of the appearance of the same DP with a *be+V* verbal complex is $p_{\text{ILL}}+p_{\text{be,ILL}}$, where $p_{\text{be,ILL}}$ is a positive value. This is a systematic effect of the VM *be*, we can see this with the verb *rúg* 'kick' (3a-b) as well as with other verbs: *gurul* 'roll', *fut* 'run' and *mászik* 'climb'.

(3) a. Péter rúgta a labdá-t a kapu-ba / kapu-ig.
Peter.NOM kicked the ball-ACC the gate-ILL gate-TERM
'Peter kicked the ball into/to the goal.'
b. Péter be rúgta a labdá-t a kapu-ba / *kapu-ig.
Peter.NOM VM kicked the ball-ACC the gate-ILL gate-TERM
'Peter kicked the ball into/*to the goal.'
c. Péter be rúgott a Staropramen-től.
Peter.NOM VM kicked the Staropramen-ABL
'Peter got drunk from Starobrno.'

As (3c) shows, the particle *be* 'into' can change the argument structure of the verb *rúg* 'kick' in another way, too: the verbal complex *be+rúg* can take an ablative argument, but this change does not appear with any other verb, it is a non-systematic change. Our analysis rightly predicts this verbal complex to have a non-compositional meaning.

We also tested the usability of the definition of asemantic compositionality through corpus-based analysis. During the corpus analysis, we examined the occurrences of the preverbs *el* 'away' and *ki* 'out' with 80-80 verbs, analyzing each preverb-verb pair with 1000-8000 sentences. We took into account the frequency of different case markers that appeared alongside the verbs. We determined how the frequency of these markers changed when a verb was used with or without the preverb. If this change was systematic for multiple verbs, we considered the preverb + verb construction to be asemantically compositional; otherwise, it was considered idiomatic. The distinction between compositional and idiomatic expressions functions as a syntactic marker indicating the plausibility of a given verbal complex (in a particular context) being non-compositional.

Keywords: asemantic compositionality; argument structure; verbal modifier; corpus analysis; Hungarian

References

Fillmore, Charles J. – Paul Kay – Mary Catherine O'Connor 1988. Regularity and Idiomaticity in Grammatical Constructions: The Case of Let Alone. *Language* 64/3:501–538. doi:10.2307/414531.

Gendler Szabó, Zoltán 2000. Compositionality as supervenience. *Linguistics and Philosophy* 23/5:475–505. doi:10.1023/A:1005657817893.

Partee, Barbara H. 2004. *Compositionality in Formal Semantics. Selected Papers.* (Explorations in Semantics 1) Malden: Blackwell Publishing.

Demonstratives as propositional proforms in Hungarian

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My research explores the Hungarian construction illustrated in (1), whereby the subordinate clause is associated with a demonstrative pronoun "correlate/associate" in the main clause. My main contributions are i.) relating the referential-nonreferential aspects of the proform; ii.) invoking discourse deixis in the explanation of information-structural effects.

(1) *János az-t* *mondja,* *hogy* *Kati* *okos.*
John that-ACC says COMP Kate smart
Lit.: 'John says that_{dem} $\text{that}_{\text{comp}}$ Kate is smart.'

Recent analyses of the construction (e.g. Brandtler & Molnár 2016, den Dikken 2017) recognize two independent versions of the propositional proform: a referential, argumental pronoun and a non-referential entity, which may be an expletive or a predicative element. Which of the two (referential vs. non-referential) is instantiated is ultimately claimed to be based on the semantico-pragmatic status of the associated proposition (reflected in syntax), roughly along these lines: cataphoric use – nonreferential (predicate or expletive) proform, anaphoric use – referential (argument) proform.

I, instead of taking the referential and nonreferential versions to be separate lexical entries, propose taking a nanosyntax-based view, whereby a lexical entry may realize bigger or smaller syntactic trees. Specifically, I support an argument-predicate duality, whereby the predicative version (2b) of the proform is related to the argumental (2a) one, with the syntactic layer responsible for referentiality missing (tentatively labelled RefP here, see also Zamparelli's 2000 notion of "strong DP"). Crucially, i. deixis and referentiality are separated (for a proposal in similar spirit, see e.g. Recanti 2005, for a separate DeixP layer in demonstratives, see Dékány 2021); ii. (2a) is a superset of (2b), making it eligible to realize either feature structure.

(2) a. [RefP [DeixP [NumP [NP]]]] b. [DeixP [NumP [NP]]]

As shown in (3) (3b is based on Poole 2017), demonstrative pronouns are independently attested in both functions, lending plausibility to the present idea.

(3) a. I see that_{arg}.

b. John thinks he is beautiful, but no one else considers him $\text{that}_{\text{pred}}$.

The choice between the two is constrained by the base-generation site of the proform: complement of VP (A-position) → argument for the main verb (CP is an adjunct); spec-CP (A-bar position) → predicate of the embedded sentence (then the proform-sentence complex together saturates the main verb).

My second claim is that, contra the previous accounts, the anaphoric/cataphoric nature of the proform is not correlated with the referential/nonreferential status, but with the deictic meaning component, equally present in both usages. In these constructions, proximal proforms are associated with a higher level of salience (possibly but not necessarily anaphoricity), while distal forms can refer to fully novel (cataphoric) information as well (see

Lander & Haegeman 2018 for a nanosyntactic account for how distals are generally unmarked compared to proximals).

Based on the standard assumption that postverbal elements must be referential in Hungarian (Alberti 1997), under the previous accounts, *azt* in (4) would be anaphoric. Instead, we see that here it is cataphoric, associated with new information, in a neutral sentence.

(4) János fontolgatja az-t, hogy vesz egy autót.
John considers that-ACC COMP buys a car.
Lit.: 'John is considering that$_{dem}$ that$_{comp}$ he buys a car.'

Conversely, preverbal, predicative occurrences may have the proximal feature. In (5), the *ezt* is acceptable as long as there is some indication in the sentence that the clause is familiar or cognitively salient (*is* 'too' serves this purpose).

(5) János #(is) ez-t mondja, hogy Kati okos.
John too this-ACC says COMP Kate smart
Lit.: 'John also says this$_{dem}$ that$_{com}$ Kate is smart.'

Keywords: demonstratives; proforms; clauses; subordination

References

Alberti, Gábor. 1997. "Restrictions on the degree of referentiality of arguments in Hungarian sentences*." Acta Linguistica Hungarica* 44: 341–362.

Brandtler, Johan and Valéria Molnár. 2016. "Rethinking clausal asymmetries: Propositional pronoun insertion in Hungarian." In *Inner-sentential propositional proforms* edited by Werner Frey, André Meinunger & Kerstin Schwabe, 241–269. Amsterdam/Philadelphia: John Benjamins Publishing Company.

Dékány, Éva. 2021. *The Hungarian Nominal Functional Sequence*. Springer.

den Dikken, Marcel. 2017. "Clausal subordination and the structure of the verbal phrase." *Languages* 2 (5).

Lander, Eric and Liliane Haegeman. 2018. The Nanosyntax of Spatial Deixis. *Studia Linguistica* 72 (2): 362–427.

Poole, Ethan 2017. *Movement and the semantic type of traces*. PhD diss., University of Massachusetts Amherst.

Recanti, François. 2005. "Deixis and Anaphora." In *Semantics Versus Pragmatics* edited by Zoltán Gendler Szabó, 286–316. Oxford: Clarendon Press.

Zamparelli, Roberto. 2000. *Layers in the Determiner Phrase*. Garland Publishing Inc.

Agent-event relations in the semantics of modals. English *must* revisited.

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This project addresses the semantics of the English modal verb *must*. English modals are ambiguous, and *must* is not an exception. It expresses a number of meanings, all of which fall into the categories of either *root* or *epistemic* modalities.

Studies on linguistic modality have reported on its tendcy to interact with other categories, such as aspect or negation (e.g. Abraham 2008, Hacquard 2009 or de Haan 1997). The present investigation has been particularly motivated by Abraham's (2006: 8) claims about modality-aspect convergence: "[p]erfective aspect is compatible with root modality" and "[i]mperfective aspect is compatible with epistemic modality".

As regards aspect, English does not mark the *perfective*/*imperfective* dichotomy that Abraham's (2008) generalizations take into account. However, it uses the *progressive*, which presents an event as ongoing at the time of reference, and thus imperfective (Binnick 2006, Comrie 1976/2001, Sasse 2002). The English progressive is expressed with the *progressive infinitive*, which is one of the verb forms that can follow a modal in a modal predicate.

This study analyzes *must* followed by the progressive infinitive. It does not investigate the predicates with the perfect progressive infinitive, since the perfect can also be responsible for the epistemic readings of modals (cf. Szymański 2019), which could blur the pure influence of the progressive.

Following Abraham (2008: 6), *must* with the progressive can be expected to express *epistemic* readings. Nevertheless, it is possible to find examples such as: *You* ***must be working*** *when the inspector comes in* (Alexander 1991: 212), in which *must* expresses the root flavor, despite being followed by the progressive.

The present study makes an attempt to explain why the imperfective does not always trigger epistemic readings. To solve the research problem, the study adapts the model of *the semantic field of modal expressions* proposed by Kratzer (1991), as a means of disambiguating modals. The model is based on the concept of *conversational backgrounds*, i.e. *possible worlds* that make up the context of an utterance. Conversational backgrounds constitute two (out of three) domains of the Kratzerian model: *the modal base* and *the ordering source*. This project does not deal with *the modal force*.

The study analyzes a sample of 100 occurrences of *must* followed by the progressive infinitive of the main verb retrieved randomly from *The Corpus of Contemporary American English* (Davies 2008-). Initially, the study establishes the semantic field of *must* with the progressive, focusing on the conversational backgrounds. It uses the modal base to determine the modal flavor of *must* (after Kratzer 1991: 649). Then, it looks at selected characteristics of the ordering sources, and scrutinizes the relationship between the agent and the ongoing event expressed in the proposition. The paper attempts to demonstrate that the lack of the modality-aspect convergence can be explained with the conversational backgrounds that the speaker evaluates. The results show that there is a correspondence between the factual or

supposed/inferred availability of the event to the agent, which is responsible for triggering particular modal flavors of *must*, irrespective of the progressive (or the imperfective).

Keywords: modality; semantics; modal flavor; semantic field of modality; modality-aspect convergence

References

Source:

Davies, Mark. 2008-. *The Corpus of Contemporary American English (COCA)*. Available online at https://www.english-corpora.org/coca/.

Critical literature:

Abraham, Werner. 2008. "On the logic of generalizations about cross-linguistic aspect-modality links." In *Modality–aspect inter-faces: implications and typological solutions*, edited by Werner Abraham and Elisabeth Leiss, 3–13. Amsterdam, Philadelphia: John Benjamins.

Alexander, Louis G. 2003. *Longman English Grammar*. Harlow: Pearson Education Limited.

Binnick, Robert I. 2006. "Aspect and aspectuality." In *The handbook of English linguistics,* edited by Bas Aarts and April M. S. McMahon, 244–268. Malden, MA: Blackwell Publishing.

Comrie, Bernard. 1976/2001. *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge, New York: Cambridge University Press.

De Haan, Ferdinand. 1997. *The interaction of modality and negation. A typological study*. New York, London: Garland Publishing, Inc.

Hacquard, Valentine. 2009. "On the interaction of aspect and modal auxiliaries." *Linguistics and Philosophy* 32: 279-312.

Kratzer, Angelika. 1991. "Modality." In *Semantics: An international handbook of contemporary research* edited by Armin von Stechow and Dieter Wunderlich, 639-650. Berlin: de Gruyter.

Sasse, Hans-Jürgen. 2002. "Recent activity in the theory of aspect: Accomplishments, achievements, or just non-progressive state?" *Linguistic Typology* 6 (2): 199-271.

Szymański, Leszek. 2019. *Modal auxiliaries and aspect in contemporary American English – A corpus-based Study*. Zielona Góra: Oficyna Wydawnicza Uniwersytetu Zielonogórskiego.

Result states, telicity and boundedness: Evidence from event identification in Mandarin Chinese

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This paper investigates the relationship between result states, telicity and boundedness with evidence from V *de* O clefts in Mandarin Chinese, a pattern involving both focus and eventuality. Analyzed as a special case of inverse copular sentences, these clefts serve to specify/identify a bounded event, instead of an individual as in the simple cases. Crucially, the verbal particle *de* is argued to head an Asp*P (Ramchand & Svenonius 2014) and mark the event as bounded/perfective. This approach to V *de* O clefts provides evidence for the necessity to distinguish between *result states*, *result situations* and *entailed situations*. It is shown that what is presupposed in these clefts is not necessarily the whole event, but can be simply the entailed situation, which amounts to the actual realization of the inherent result state in the case of telic predicates; result situations, by contrast, cannot be presupposed by this focus construction. In other words, while result situations only bear pragmatic relevance (i.e., depending on context), result states and entailed situations are grammatically encoded: they are respectively associated with telicity and boundedness, which have been distinguished by many (e.g., Depraetere 1995).

Chinese V *de* O clefts are a focus marking pattern featuring a copula *shi* and a post-verbal functional element *de*. Unlike English-type *it*-clefts which only mark term focus (i.e., subject/adjunct/object), Chinese V *de* O clefts can also convey non-term focus (e.g., verb/VP/proposition) with the right predicate, prosody and context, as shown below (stress indicated by underline):

(1) *Wo* *shi* *mai* *de* *mianbao.* [verb focus]
1SG be buy DE bread
'I BOUGHT the bread. (I didn't BAKE it myself.)' OR
'It was BUYING the bread (that led to me having it, not baking it).'

(2) *Wo* *shi* *mai* *de* *mianbao.* *(Lusi* *shi* *shua* *de* *wan.)* [VP focus]
1SG be buy DE bread Lusi be brush DE bowl
'I bought the bread. (Lusi did the dishes.)' OR
'It was buying the bread (that I did for the family dinner).'
[as an answer to "What did you and Lusi do for the family dinner?"]

(3) *Shi* *wo* *jiao* *zhu* *de* *ta.* [proposition focus]
be 1SG call stop *DE* 3SG
'(It is that) I stopped her/him from leaving (by calling).' OR
'It was my stopping her/him from leaving (that led to her/him still being here).'
[as an answer to "Why is (s)he still here?"]

This peculiarity can be explained if we treat these clefts as a special case of inverse copular sentences (as indicated by the rephrased translations): different from the simple cases where an individual/entity gets specified/identified, V *de* O clefts serve to identify a bounded event,

whose existence is presupposed with a null *pro*. This pattern is thus argued to share the same essential structure of inverse copular sentences as proposed by Shlonsky and Rizz (2018) and Shlonsky (2021): a Foc(us)P is selected by the identificational copula and itself selects a PredP, which represents the underlying predicative small clause (SC). The sole difference lies in the SC components: V *de* O clefts feature an Asp*P as the eventive core of the SC subject and a *pro*-predicate (Moro 1997) as the SC predicate, the latter referring to an eventive discourse referent (i.e., a bounded event existentially presupposed in the discourse context).

The rephrased translations for (1–3) also demonstrate different cases of presupposition: while VP focus clefts (2) only presuppose the existence of a bounded event (not necessarily telic), which constitutes the *entailed situation*, verb/proposition focus clefts (1/3) presuppose the existence of a bounded, telic event, which amounts to the actual realization of the inherent *result state* entailed by the telic predicate (and that there should be alternative ways to achieve this state).

Another interesting contrast can be seen between the proposition focus cleft in (3) and an impossible case like below. Even uttered with a relatively neutral prosodic pattern (i.e., without narrow stress), (4) still cannot be a felicitous answer to a *how-come* question like "How come you look so tired?" (regardless of the subject's distribution):

(4) Intended proposition focus

* *{Wo}* *shi* *{wo}* *zuotian* *qi* *che* *qu* *de* *Faguo.*
1SG be 1SG yesterday ride bike go DE France
Intended: '(It is that) I went to France by bike yesterday.' OR
'It was my going to France by bike yesterday (that led me looking tired).'

This seems to suggest a difference in the (intended) presuppositions: "stopping her/him from leaving" naturally entails "her/him still being here" as the result state, which can be presupposed, whereas "looking tired" is not a necessary consequence of "going to France by bike yesterday", hence an impossible presupposition in this construction. Being context-dependent, the latter case of result situations only bears pragmatic relevance, as opposed to the former case of result states, which are lexically encoded into the telic predicate.

Keywords: result states, telicity, boundedness, Chinese V *de* O clefts

References

Depraetere, Ilse. 1995. "On the Necessity of Distinguishing between (Un)Boundedness and (A)Telicity." Linguistics and Philosophy 18 (1): 1–19.

Moro, Andrea. 1997. *The Raising of Predicates: Predicative Noun Phrases and the Theory of Clause Structure*. Cambridge University Press.

Ramchand, Gillian, and Peter Svenonius. 2014. "Deriving the Functional Hierarchy." *Language Sciences, New Directions in Universal Grammar*, 46 (November): 152–74. https://doi.org/10.1016/j.langsci.2014.06.013.

Shlonsky, Ur. 2021. "Locality and the 'Low' Focus Phrase." Presented at the *4th International Workshop on Syntactic Cartography* (IWSC2021), Beijing, October 31.

Shlonsky, Ur, and Luigi Rizzi. 2018. "Criterial Freezing in Small Clauses and the Cartography of Copular Constructions." In *Freezing*, edited by Jutta Hartmann, Marion Jäger, Andreas Kehl, Andreas Konietzko, and Susanne Winkler, 29–65. De Gruyter. https://doi.org/10.1515/9781501504266-002.

Contrastive uses reconsidered: the case of Hungarian exophoric demonstratives

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Background. Traditionally, the choice of exophoric demonstratives in Hungarian, a two-term demonstrative system (*ez/az* 'this/that'), is assumed to be determined by the relative distance of the referent from the speaker (Laczkó 2010). Previous experimental studies have challenged this idea: for instance, Tóth et al. (2014) showed that when demonstratives are used contrastively, distal demonstratives also surface when the referent is close to the speaker. Jungbluth (2003) also questioned the distance-based approach, she argued that in face-to-face situations, Spanish speakers use only proximal demonstratives to refer to entities that are located within the shared space between the interlocutors.
Aims. To test Jungbluth's (2003) hypothesis about demonstrative selection in Hungarian in face-to-face conversations restricted to table-top space in contrastive and non-contrastive situations.
Methods. Adopting the design of Shin et al. (2020), a puzzle completion task was conducted (16 participants). In a scripted conversational setting, the experimenter asked *which-piece* questions (*Which piece has the belly of the little mole?*) to elicitate spontaneous use of demonstratives. For the arrangement of the pieces, see Figure 1. The experimenter and the participant sat face-to-face across a table. Only the experimenter was allowed to touch the puzzle pieces.
Two factors were investigated:
(i) relative distance from the participant (levels: within-arm's-reach/near space: 0–50 cm; beyond arm's reach/far space: 50–90 cm).
(ii) contrastiveness (see Meira and Terrill 2005: 1132) in table-top space (levels: contrastive use: speakers use demonstratives to create a contrast between two entities (e.g. *This finger doesn't hurt, but that finger does*); non-contrastive use: no such contrast can be observed).
Assumptions. If shared space determines the selection of demonstratives, only proximal demonstratives will be used, regardless of the type of situation (contrastive vs non-contrastive).
Results. 1. *In non-contrastive situations* the hypothesis that shared space triggers only proximal demonstratives is rejected; in the near/far region participants **uniformly** used proximal/distal terms, respectively. This proves that distance is a decisive factor even in this limited space. It was observed that at the boundary of the near/far region, i.e., at arm's reach (50–60 cm), both terms occurred, proximal and distal demonstratives were used in nearly the same proportion. This suggests that the boundary between near and far is not rigid, there is an in-between region, which can be regarded as an extension of the proximal region.
2. *In contrastive situations*, in a similar manner, both proximal and distal terms occurred, therefore, Jungbluth's (2003) hypothesis was not supported. Moreover, the results indicate that **two subtypes of contrast** can be differentiated: *same region contrast* (SRC) and *across regions contrast* (ARC). In line with Tóth et al. (2014), proximal-distal demonstrative pairs

surface in contrastive uses in near space, in SRC (***Ezen*** *a darabon van a kisvakond szeme, nem* ***azon*** 'The mole's eye is on this piece, and not on that one'.) A new pattern was also identified: proximal-proximal pairs (***Ezen*** *is van egy kis darab a talicskából, de* ***ezen*** *van a nagyobb darab* 'On this one, there is a small part of the cart, but on this one, there is a bigger part.') can also indicate contrast in SRC, both within near and in-between space (no data for far space). As opposed to that, in ARC only proximal-distal demonstrative pairs occur.

Conclusion. Shared space does not determine the selection of Hungarian exophoric demonstratives, relative distance is decisive even in a restricted setting (table-top space). Moreover, the findings suggest that within contrastive uses finer distinctions should be introduced: it is not enough to differentiate between SRC and ARC, the location of the entities also needs to be investigated as a potential factor (levels: entities arranged across the sagittal/lateral/diagonal axes, see also Peeters et al. 2015).

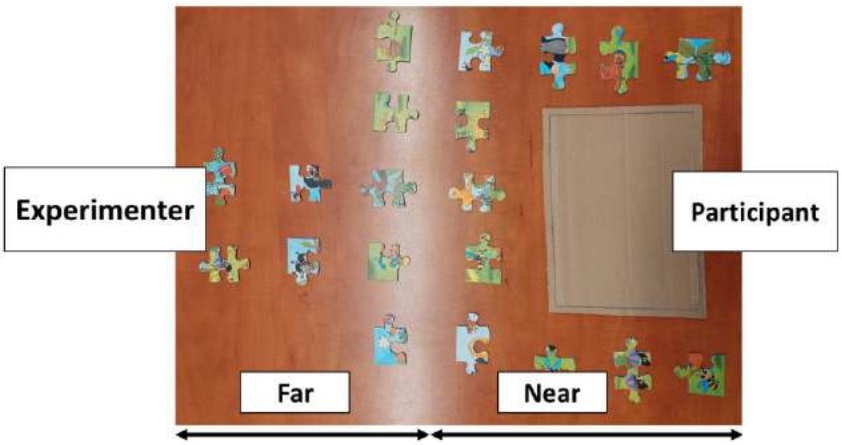

Figure 1. The layout of the task

Keywords: demonstratives; contrastive; space; experimental pragmatics; Hungarian

References

Jungbluth, Konstanze. 2003. "Deictics in the conversational dyad: Findings in Spanish and some cross-linguistic outlines." In *Deictic Conceptualisation of Space, Time and Person.* edited by Friedrich Lenz, 13–40. Amsterdam: John Benjamins.

Laczkó, Krisztina. 2010. "Demonstrative pronouns in spatial deixis, discourse deixis, and anaphora." *Acta Linguistica Hungarica* 57(1): 99–118.

Meira, Sérgio, and Angela Terrill. 2005. "Contrasting contrastive demonstratives in Tiriyo´ and Lavukaleve." *Linguistics* 43(6): 1131–1152.

Peeters, David, Peter Hagoort, and Asli Özyürek. 2015. "Electrophysiological evidence for the role of shared space in online comprehension of spatial demonstratives." *Cognition*136, 64–84.

Shin, Naomi, Luis Hinojosa-Cantú, Barbara Shaffer, and Jill P. Morford. 2020. "Demonstratives as indicators of interactional focus: Spatial and social dimensions of Spanish *esta* and *esa*." *Cognitive Linguistics* 31(3): 485–514.

Tóth, Enikő, Péter Csatár, and Arina Banga. 2014. "Exploring Hungarian and Dutch Gestural Demonstratives." In *Complex Visibles Out There. Proceedings of the Olomouc Linguistics Colloquium 2014: Language Use and Linguistic Structure*. edited by Ludmila Veselovská and Markéta Janebová, 607–625. Olomouc: Palacký University.

A note on speech act recursion

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Overall summary – We present a number of facts about naturally occuring questions which have not been discussed and which are captured by a syntactic constraint on the speech act level of the sentence.

Repetitive questions and a generalization – Questions such as (1)-B_1, which we will call "repetitive questions", occur quite naturally in conversations. (A_1 is the first utterance by A, B_2 the second by B, etc).

(1) A_1 Are you married?
B_1 Am I married?
A_2 Yes. That's what I asked.
B_2 No. I'm single.

Descriptively, (1)-B_1 is not asking whether B, the speaker, is married, but is asking whether A is asking whether B is married. Assuming that speech acts are syntactically represented, i.e. that "performative prefixes" are part of logical form, (1)-A_1 and (1)-B_1 can be analyzed as having the logical form (LF) in (2) (cf. Ross 1970; Lakoff 1970; Sadock 1974; Krifka 1995, 2001; Sauerland and Yatsushiro 2017; Trinh and Truckenbrodt 2018).

(2) A_1 Are you married?
LF: $\underbrace{\text{A ASK [WHETHER}}_{\text{performative prefix}}$ are [you_B t_{are} married]]
B_1 Am I married?
LF: $\underbrace{\text{B ASK [WHETHER}}_{\text{performative prefix}}$ [$\underbrace{\text{A ASK [WHETHER}}_{\text{performative prefix}}$ am [I_B t_{am} married]]]]

Note that the LF of (2)-B_1 contains *two* subjacent (i.e. immediately embedding) performative prefixes. We will argue that that is the maximum. Consider the exchange in (3).

(3) A_1 Are you married?
B_1 Am I married? (Intended reading: 'Are you asking whether I am married?')
A_2 #Are you married? (Intended reading: 'Are you asking whether I am asking whether you're married?')

The LF in (4) would yield the intended reading of (3)-A_2. The fact that (3)-A_2 is deviant under this reading suggests that LFs such as (4), where there are more than two subjacent performative prefixes, are ill-formed. The generalization is stated in (5).

(4) *$\underbrace{\text{A ASK [WHETHER}}_{\text{performative prefix}}$ [$\underbrace{\text{B ASK [WHETHER}}_{\text{performative prefix}}$ [$\underbrace{\text{A ASK [WHETHER}}_{\text{performative prefix}}$ are [you_B t_{are} married]]]]]]

(5) *Constraint on Subjacent Performatives (CSP)*
The number of subjacent performative prefixes cannot exceed two

Declarative questions – A curious fact about yes/no questions without subject auxiliary inversion is that they cannot be the target of a repetitive question. We follow (Gunlogson 2002, 2003) and call these "declarative questions". Consider (6).

(6) A_1 John is married?
B_1 #He is married? (Intended meaning: 'Are you asking me whether John is married?')

Under the intended reading, (7)-B_1 is deviant. This fact follows from the CSP given the assumption that declarative questions have the logical form [S ASK [WHETHER [H ASSERT p]]], where S is the speaker and H the hearer (Gunlogson 2002, 2003; Trinh and Crnic 2011; Krifka 2017). Thus, the LFs of (6)-A_1 and (6)-B_1 would be (7-a) and (7-b), respectively.

(7) a. [A ASK [WHETHER [B ASSERT [John is married]]]]
b. *[B ASK [WHETHER [A ASK [WHETHER [B ASSERT [he_{John} is married]]]]]]

Revised Performative Hypothesis – The hypothesis that speech acts are grammatically represented has been severally criticized. We present a revised version of the hypothesis which we argue can address the most serious of these criticisms.

Keywords: speech acts; performative hypothesis; questions

References

Gunlogson, Christine. 2002. "Declarative questions". *Proceedings of SALT* 12:144–163.
Gunlogson, Christine. 2003. *True to Form: Rising and Falling Declaratives as Questions in English*. New York: Routledge.
Krifka, Manfred. 2017. "Negated polarity questions as denegations of assertions". In *Contrastiveness in Information Structure, Alternatives and Scalar Implicatures*, ed. by Chungmin Lee, Ferenc Kiefer, and Manfred Krifka, 359–398. Spinger Cham.
Krifka, Manfred. 2001. "Quantifying into question acts". *Natural Language Semantics* 9 (1): 1–40.
Krifka, Manfred. 1995. "The semantics and pragmatics of polarity items". *Linguistic Analysis* 25 (3-4): 209–257.
Lakoff, George. 1970. "Linguistics and natural logic". *Synthese* 22:151–271.
Ross, John Robert. 1970. "On declarative sentences". In *Readings in English Transformational Grammar*, ed. by Roderick A. Jacobs and Peter S. Rosenbaum, 222–272. Waltham: Ginn / Company.
Sadock, Jerrold. 1974. *Toward a Linguistic Theory of Speech Acts*. New York: Academic Press.
Sauerland, Uli, and Kazuko Yatsushiro. 2017. "Remind-Me Presuppositions and Speech-Act Decomposition: Evidence from Particles in Questions". *Linguistic Inquiry* 48:651–677.
Trinh, Tue, and Luka Crnic. 2011. "The rise and fall of declaratives". *Proceedings of Sinn und Bedeutung* 15:645–660.
Trinh, Tue, and Hubert Truckenbrodt. 2018. "The Participant-Pronoun Restriction: English and Vietnamese". *Proceedings of NAFOSTED* 5:317–321.

Czech diminutive adjectives as evidence for a rich internal structure of gradable adjectives

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Introduction. Based on their morphology, Czech adjectives can be divided into at least three classes. The first class of adjectives has the suffix *n* in between the root and the agreement marker, e.g., *jem-n-ý* 'smooth,' see the first column in Table 1. The second class of adjectives has the suffix *k*, e.g., *leh-k-ý*, see Table 2. In the third class, the obligatory agreement marker attaches to the bare root, e.g., *slab-Ø-ý* 'weak.' The absence of a stem marker is depicted by the Ø in the first column of Table 3. In this paper, we present an analysis of these three classes in Nanosyntax (Starke 2018), relying on the notion of root size (Caha et al. 2019).

Contextual allomorphy. Perhaps the simplest analysis of the three classes would decompose the adjective into a $\sqrt{root}$ node and an adjectival suffix little *a*, as in (1). One could then write insertion rules as in (2), where *k* is the default exponent for little *a*, while the other markers are sensitive to the class of the root, and they are only inserted when next to such a root. In what follows, we argue that this is too simplex, and that *n* and *k* are not allomorphs of a single head little *a*, but differ in their structural position.

Diminutive adjectives. Czech can productively form diminutive adjectives. They intensify the meaning of negative scale adjectives (short → very short), and attenuate the meaning of positive scale adjectives (warm → warm-ish). Importantly for us, the morphological derivation of these forms cannot be explained under the view in (1) and (2).

To see that, consider first diminutive adjectives from the k class in Table 2. We can see that the diminutive *ouč* appears in between the root and the adjectival augment k (e.g., *leh-ouč-k-ý* 'very easy'). We must therefore posit the structure (3), where DMV appears in between the root and the little *a*. The position of DMV between the root and little *a* can also shed light on the diminutives of -Ø adjectives, which acquire *k* in the diminutive (e.g., *slab-ouč-k-ý* 'very weak'). This is explained in (4): since little *a* is no longer local to the root, the default exponent of little *a* (i.e., k) appears.

However, the diminutives of *n* adjectives cannot be accommodated like this. Table 1 shows that *n* precedes the diminutive, while *k* follows (e.g., *jem-ň-ouč-k-ý* 'very smooth'). Once we realise that *n* and *k* can stack (when separated by DMV), we need to postulate two different projections: one for *n* (below DMV) and one for *k* (above DMV), see (5). We call these projections DIRection (distinguishing positive vs. negative adjectives) and POINT (setting the standard on the scale), respectively, with the root realising DIMension, following Vanden Wyngaerd et al. (2020).

A nanosyntax solution. Once the structure with three non-diminutive projections is adopted (i.e., DIM-DIR-POINT), we can provide an account of the three different adjective classes in terms of different root size. This solution relies on phrasal spellout, whereby a lexical item can spell out several heads dominated by one phrasal node. Adjectives with the augment *n* are

the smallest: the root only spells out DIMP, and *n* spells out both DIR and POINT (see (6)). Adjs with *k* are one projection bigger: they spell out DIRP, and POINT is spelled out by *k* (see (7)). The Ø adjectives spell out the whole POINTP, obviating the need for any augment. The first lexicalisation table at the bottom of this page shows the different root sizes.

A crucial question is why *k* appears in all diminutives. This is because when DMV is present, whatever precedes DMV can maximally lexicalise DIRP. Since DMV intervenes and prevents the root or the-*n* augment from lexicalising POINT, we need *k* to spell out POINT in the diminutive. The second lexicalisation table at the bottom right of the page shows this intervention effect of the diminutive.

Conclusions. A closer look at the diminutive of Czech adjectives reveals that *k*/*n* are not allomorphs of the same adjectival head. They each realise a different projection, providing evidence for at least three heads, and hence for a decomposition of positive degree adjectives.

Table 1

POS	DMV	GLOSS
jem-n-ý	jem-ň-ouč-k-ý	‘smooth’
lev-n-ý	lev-ň-ouč-k-ý	‘cheap’
hod-n-ý	hod-ň-ouč-k-ý	‘kind’
šťast-n-ý	šťast-ň-ouč-k-ý	‘happy’
skrom-n-ý	skrom-ň-ouč-k-ý	‘modest’
něž-n-ý	něž-ň-ouč-k-ý	‘gentle’
sluš-n-ý	sluš-ň-ouč-k-ý	‘kind’
pěk-n-ý	pěk-ň-ouč-k-ý	‘pretty’
mír-n-ý	mír-ň-ouč-k-ý	‘peaceful’

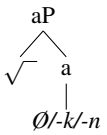
Table 2

POS	DMV	GLOSS
leh-k-ý	leh-ouč-k-ý	‘easy’
heb-k-ý	heb-ouč-k-ý	‘smooth’
měk-k-ý	měk-ouč-k-ý	‘soft’
slad-k-ý	slaď-ouč-k-ý	‘sweet’
hlad-k-ý	hlaď-ouč-k-ý	‘smooth’
níz-k-ý	niz-ouč-k-ý	‘low’
blíz-k-ý	bliz-ouč-k-ý	‘near’
úz-k-ý	uz-ouč-k-ý	‘narrow’
krát-k-ý	krať-ouč-k-ý	‘short’

Table 3

POS	DMV	GLOSS
slab-Ø-ý	slab-ouč-k-ý	‘weak’
mil-Ø-ý	mil-ouč-k-ý	‘lovely’
tich-Ø-ý	tich-ouč-k-ý	‘silent’
mal-Ø-ý	mal-ouč-k-ý	‘small’
dobr-Ø-ý	dobr-ouč-k-ý	‘good’
čist-Ø-ý	čisť-ouč-k-ý	‘clean’
hloup-Ø-ý	hloup-ouč-k-ý	‘stupid’
mlad-Ø-ý	mlaď-ouč-k-ý	‘young’

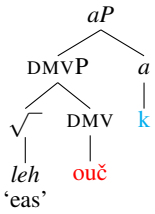
(1)



(2) Arbitrary root classes

a. a → k
b. a → n / Class-n __
c. a → Ø / Class-Ø __

(3)



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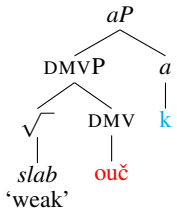

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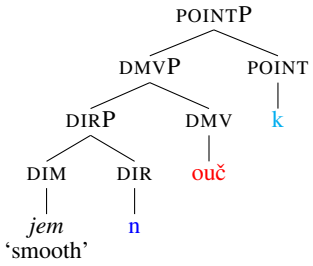

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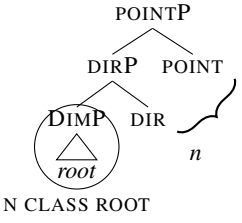

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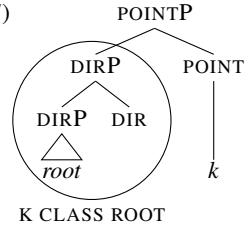

	DIR	DIM	POINT	GLOSS
jem-n-ý	jem	-n		‘smooth’
leh-k-ý	leh		-k	‘light’
slab-ý	slab			‘weak’

	DIR	DIM	DMV	POINT	GLOSS
jem-n-ý	jem	-n	ouč	-k	‘smooth’
leh-k-ý	leh		ouč	-k	‘light’
slab-ý	slab		ouč	-k	‘weak’

Keywords: adjectives; nanosyntax; Czech

References. Caha, De Clercq, Vanden Wyngaerd (2019) The fine structure of the comparative. *Studia Linguistica*. **Vanden Wyngaerd et al. (2020)** How to be positive. *Glossa*.

The nanosyntax of Ukrainian deadjectival verbs

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1. **outline** This study considers Ukrainian deadjectival verbs comprised of an adjectival root (optionally preceded by a prefix), an inchoative or a causative suffix, and an agreement marker. Inchoatives and causatives have different morphological markers. Inchoatives can be built both on the positive and the comparative forms of an adjective, while causatives are built only on the positive form. These differences in morphology can be explained using Nanosyntax.
2. **the data** Ukrainian deadjectival verbs have dedicated causative and inchoative morphology: a thematic suffix *-y* for causatives (Table 1) and a thematic suffix *-i* for inchoatives (Table 2).

Adjectives		**Causatives**	
bil-yj	white	bil-**y**-v	made white
vesel-yj	funny	vesel-**y**-v	made funny

Table 1. Causatives in Ukrainian

Adjectives		**Inchoatives**	
bil-yj	white	bil-**i**-v	became white
vesel-yj	funny	vesel-**i**-v	became funny

Table 2. Inchoatives in Ukrainian

Interestingly, Ukrainian inchoatives can also be formed on the comparative form of an adjective, namely an adjective with a comparative marker *-iš*, as in Table 3. In such case it has to be followed by a thematic suffix *-a*. Such option is not available for causatives, as in Table4.

Adj POS	**Adj CMPR**	**Inch POS**		**Inch CMPR**	
bil-yj	bil-iš-yj	bil-**i**-v	became white	bil-iš-a-v	became whiter
vesel-yj	vesel-iš-yj	vesel-**i**-v	became funny	vesel-iš-a-v	became funnier

Table 3. Inchoatives in Ukrainian: positive and comparative

Adj POS	**Adj CMPR**	**Caus POS**		**Caus CMPR**	
bil-yj	bil-iš-yj	bil-**y**-v	made white	-	-
vesel-yj	vesel-iš-yj	vesel-**y**-v	made funny	-	-

Table 4. Causatives in Ukrainian: positive and comparative

3. analysis I am using the framework of Nanosyntax (Starke 2009) to account for the observed differences between causatives and inchoatives. Two important ingredients are submorphemic syntax (there are more featural distinctions than there are morphemes available), and phrasal spell-out (spell-out targets phrases, not heads). I suggest that the differences in the morphology of Ukrainian deadjectival verbs come from the number of features that inchoatives and causatives spell out (proposed for Czech by Caha et al. 2021). I adopt the containment approach in Vanden Wyngaerd et al.: "the causative verb contains the inchoative, just like both types of verbs contain the adjective" (2022: 251). Ramchand (2008) suggested that the InitP is absent in inchoatives. As a result, in the tree I am using for causatives (Figure 1) the marker *-y* spells out ProcP and InitP, while in the tree for inchoatives (Figure 2) the marker *-i* spells out ProcP only.

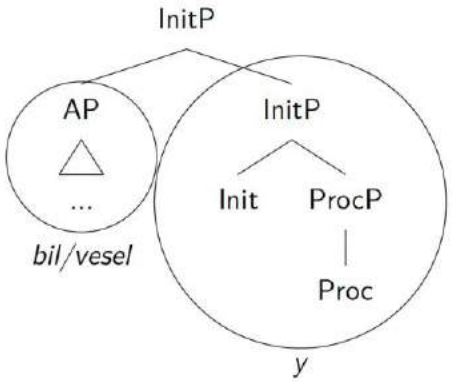

Figure 1

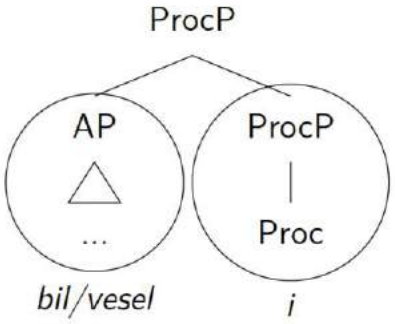

Figure 2

Now, there also has to be an explanation for why inchoatives can be built both on the positive and comparative, while causatives are only built on the positive. I suggest that there has to be a place for C1 and C2 (comparative 1 and 2 respectively) which is presented in (Figure 3). In case of inchoatives which are build with a comparative marker *-iš* (Inch 1) C1 is spelled out as *-i* (blue cell), C2 is spelled out as *-š* (lime), and Proc is spelled out as *-a* (cyan). In case of inchoatives which do not have comparative morphology (Inch 2) C1, C2, and Proc are all spelled out as *-i* (pink). In case of causatives (Caus) C1, C2, Proc, and Init all get spelled out as *-y* (lilac). Init is absent in inchoatives (black cells) and present in causatives.

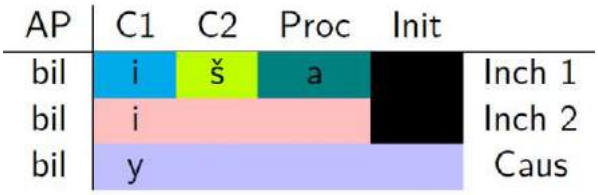

Figure 3

4. conclusions Different morphological markers of deadjectival verbs in Ukrainian and their ability of being built on the positive and/or comparative degree of adjectives are due to the number of features that their thematic and comparative suffixes spell out.

Keywords: adjectives, verbs, comparatives, nanosyntax, Slavic

References

Caha, Pavel, De Clercq, Karen, and Vanden Wyngaerd, Guido. 2021. Zero morphology and change-of-state verbs. *Zeitschrift für Sprachwissenschaft*.

Ramchand, Gillian. 2008. *Verb Meaning and the Lexicon*. Cambridge: Cambridge University Press.

Starke, Michal. 2009. Nanosyntax: A short primer to a new approach to language. *Nordlyd* 36: 1–6.

Vanden Wyngaerd, Guido, and De Clercq, Karen, and Caha, Pavel (2022) A nanosyntactic approach to Dutch deadjectival verbs. *Linguistics in the Netherlands* 39(1): 240-262. https://doi.org/10.1075/avt.00072.wyn

Phonetic imitation of English front vowels by native Polish learners of English

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Phonetic imitation is an automatic adjustment of one's pronunciation towards that of a model talker. Imitation is a fundamental human behaviour that plays a crucial role in language learning and use. Previous studies have shown that spectral and durational features are imitated in both conversational interactions and in a laboratory setting. Imitation has also been found to play an important role in second-language speech learning with several studies showing that foreign language learners are able to approximate native-like pronunciation in tasks based on direct shadowing.

The current study is intended to extend the findings related to the imitation of vowel properties by foreign language learners. More specifically, the central research question is whether the speech of native Polish learners of English exhibits acoustic properties typical of English vowels, as a result of exposure to a native-English model. Polish and English vowels differ in terms of their number, timbre, the use of durational contrasts, and in terms of formant dynamics or VISC (Vowel Inherent Spectral Change), which describes vowels' change of timbre throughout their articulation, as reflected by their formant movements. The two languages constitute an adequate example of those pairs of languages, where one is relatively simple (Polish), and the other relatively complex (English) in terms of their vowel systems, leaving learners with some room for phonetic adjustment.

Previous findings in the area suggest that learners of English imitate spectral properties of the *had* vowel (Rojczyk 2013) and vowel duration contrasts such as those found in the *hit-hid* pair (Zając and Rojczyk 2014). The current study extends these findings by considering more English vowels, including those which are more similar to their closest Polish counterparts, putting the capacity to imitate more subtle differences to a test. Additionally, the current study provides a more complete picture of duration-based convergence, by accounting for word-duration changes, which themselves may be responsible for vowel-duration changes when imitating a model-talker. What is also missing in our current understanding of phonetic imitation is whether imitative performance is influenced by the presence of the stimuli's orthographic form, which is speculated to guide the participants responses in the imitation task through the introduction of an additional, potentially interfering modality. Finally, no studies have tested the dynamic aspect of vowel quality in an imitation paradigm, even though in languages such as English vowel dynamics play an important role in their identification (Jenkins et al. 1983). Because a similar role of VISC was not found in languages such as Polish (Schwartz et al. 2016), it is called into question whether Polish learners can overcome their native pronunciation habits in that, rather subtle regard, as a result of exposure to a native English model.

The assessment of the degree of imitation involved acoustic analysis of recorded speech, produced by 30 native Polish adult learners of English. In the first task, their baseline values were established by having them read 8 English words (each four times) – two words per each

of the four English front vowels: *heed*, *hid*, *head*, and *had*. The second task involved repeating the same words after a native English model-talker, with half of the participants exposed to auditory stimuli only, and the other half with the stimuli's accompanied orthographic form. The following measurements were taken from both tasks, using Praat: vowel and word durations, formant frequencies F_1 and F_2 at vowel mid-points, VISC operationalized as trajectory length (see Fox and Jacewicz 2009).

A series of mixed-effects models revealed that adult learners of English shifted their pronunciation habits towards more native-like values, but to varying degrees. More specifically, the participants extended their relative vowel duration contrasts related to the voicing status of the coda consonant. Formant frequencies, measured at vowel mid-points, displayed slight increases, suggesting either vowel fronting or lowering, depending on the vowel. Vowel dynamics, calculated as the sum of formant shifts taken from three vowel sections, were also found to have increased. The presence of the stimuli's orthographic form in the imitation task did not have an effect on the extent of imitative performance, regardless of the parameter measured. The overall conclusion drawn from these results is that even the more subtle differences, such as those between seemingly similar vowels are subject to phonetic imitation, and so are features that are rarely explicitly taught, such as vowel dynamics.

Keywords: pronunciation; imitation; vowels

References

Babel, Molly. 2012. "Evidence for phonetic and social selectivity in spontaneous phonetic imitation." *Journal of Phonetics* 40 (1): 177–189.

Fox, Robert A., and Ewa Jacewicz. 2009. "Cross-dialectal variation in formant dynamics of American English vowels." *Journal of the Acoustical Society of America* 126: 2603–2618.

Gonet, Wiktor. 2017. *Explorations in the acoustics of English sounds*. Lublin: Maria Curie-Skłodowska University Publishing House.

Hao, Yen-Chen, and Kenneth de Jong. 2016. "Imitation of second language sounds in relation to L2 perception and production." *Journal of Phonetics* 54: 151–168.

Hillenbrand, James M. 2013. "Static and dynamic approaches to vowel perception." In *Vowel Inherent Spectral Change. Modern Acoustics and Signal Processing*, edited by Geoffrey S. Morrison and Peter F. Assmann, 9-30. Berlin, Heidelberg: Springer.

Jenkins, James J., Winifred Strange, and Thomas R. Edman. 1983. "Identification of vowels in 'vowelless' syllables." *Perception & Psychophysics* 34: 441–450.

Nielsen, Kuniko. 2014. "Phonetic imitation by young children and its developmental changes." *Journal of Speech, Language and Hearing Research* 57 (6): 2065–2075.

Rojczyk, Arkadiusz. 2013. "Phonetic imitation of L2 vowels in a rapid shadowing task." In *Proceedings of the 4th Pronunciation in Second Language Learning and Teaching Conference*, edited by John Levis and Kimberly LeVelle, 66-76. Ames, IA: Iowa State University.

Schwartz, Geoffrey, Grzegorz Aperliński, Kamil Kaźmierski, and Jarosław Weckwerth. 2016. "Dynamic Targets in the Acquisition of L2 English Vowels." Research in Language 14 (2): 181–202.

Zając, Magdalena, and Arkadiusz Rojczyk. 2014. "Imitation of English vowel duration upon exposure to native and non-native speech." *Poznan Studies in Contemporary Linguistics* 50 (4): 495–514.

Finnish Lexical Homonimics – A Quantitative Approach

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Finnish lexical homonimics has not been sufficiently researched or comprehensively described, as there exist no theoretical monographs on this phenomenon, nor any practical developments as dictionaries. Linguists have focused mainly on homoformy and homomorphy, clearly manifested in the system of Finnish (Penttilä 1975; Saukkonen 1982; Laalo 1988, 1989a, 1990), and in connection with the closely related Estonian, usually taking a comparative/contrastive (Laalo 1989b, 1992; Grünthal 1993) or sometimes a broader, i.e. Uralic (Veenker 1975; Trosterud 2006), perspective.

Finnish lexical homonimics has been described in terms of its origin – phonetic-phonological and semantic adaptation (Laalo 1989a; Wojan 2003) and unit transfer from foreign language systems (Wojan 2010). Polish Fennistic linguists have focused on sets of homonyms in a cross-linguistic approach for the Polish – Finnish and Russian – Finnish language pairs, i.e. the Slavic – non-Slavic opposition (Wojan 2014). Polish lexicologists have studied the frequencies of borrowings of homonymous lexical units in relation to their source languages (Wojan 2003; 2010). Contemporary Finnish linguistics lacks works on the quantification of lexical homonimics. In the 1980s, research was conducted on frequencies of various types of homographs (Saukkonen 1982), and at the end of the 20th century, research focused on homographs and their impact on disambiguation (Leppänen 1996).

This paper aims to present a quantitative analysis of lexical homonimics resources in contemporary Finnish. For the purpose of this analysis, a collection of Finnish homonyms was built. The research material was excerpted from the most important monolingual dictionaries of Finnish (*Nykysuomen sanakirja* vol. 1–6). The lexemes were qualified on the basis of formal and semantic criteria. The analysis centers on lexemic homonyms; whereas morphological homonymy is not taken into account. Thus, the study includes: root homonyms, indivisible regarding word-formation, as well as derivatives. Lexical homonyms were divided into complete/proper (identicalness of paradigms) and incomplete/partial (coincidence of some inflected forms) - the paradigm criterion was applied here.

The collected resources of lexical homonyms amount to 3,435 homonymous units and 1,578 homonymous sets. The authors apply the terminology and methodological apparatus developed in Wojan (2010; 2014). The study uses the term "homonem", which is defined as a unit of homonymy that organizes the set of homonyms in a given language (Wojan 2014). In other words, a homonem is a complete set of lexemes of a given language that formally meets the identicality condition, and is therefore a set of homonyms with a common form (e.g. *pakka* i) 'pack', 'bale', 'deck of cards', 'file'; ii) 'half deck' '; iii) 'slope, escarpment'; iv) 'log', v) technical 'jaw, cam') (see Wojan 2010). The study analyzes categorial membership of homonymous units (homogeneous and heterogeneous systems); types of sets (two- or multi-element sets); syllabic structures of lexical units (dependence between the length of the

lexeme counted in syllables and the intensity of its occurrence in the set of homonyms); frequencies of homonyms in terms of the scope of use (stylistic qualification), as well as relations to the class of substantive qualifiers. A preliminary analysis shows that Finnish homonyms are rich in both complete and partial lexemic homonyms; there is a relatively large group of indivisible, non-native, indigenous homonyms (e.g. *aari* i) 'ar', ii) 'aari language'). Its core is noun sets (homonems) (approx. 70%), and bisyllabic homonymous forms are dominant. It is also postulated that more scholarly attention should be given to phonetic variants and dialectal lexis due to the strong position of dialects and subdialects in Finns' everyday communication.

Keywords: Finnish language; homonymy; statistical analysis; lexical homonyms; homonimics

References

Flint, Aili. 1980. *Semantic structure in the Finnish lexicon: verbs of possibility and sufficiency*. Helsinki: Finnish Literature Society.

Grünthal, Riho. 1993. "Ammu kadunud – ammuko kadonnut? Suomen ja viron eksytyssanat ja väärät ystävät". *Virittäjä* 97 (4): 701–705.

Laalo, Klaus. 1988. "Suomen kielen sananmuotohomonymiasta". *Kieli* 3: 93–116.

Laalo, Klaus. 1989a. "Homonymiasta ja polysemiasta". *Virittäjä* 93 (2): 220–235.

Laalo, Klaus. 1989b. "Sananmuotojen homografiaa suomessa ja virossa". *Virittäjä* 93 (4): 511–541.

Laalo, Klaus. 1990. *Säkeistä patoihin: suomen kielen monitulkintaiset sananmuodot*. Vaasa: SKS.

Laalo, Klaus. 1992. *Huvitav lugu – kiinnostava juttu: suomen ja viron välinen sanaston riskiryhmä ja sen taustaa*. Tampere: SKS.

Leppänen, Erkka. 1996. "Homografiongelma tekstihaussa ja homografien disambiguointiin vaikutukset". *Informaatiotutkimus* 15 (4): 133–144.

Penttilä, Aarni. 1975. "Homonüümiast, eriti soome keelt silmas pidades". *Congressus Tertius Internationalis Fenno-Ugristarum Tallinnae Habitus* 1: 322–326.

Sadeniemi, Matti. (2002): *Nykysuomen sanakirja*. 1-6. Helsinki: WSOY.

Saukkonen, Pauli et al. 1982. "Suomen kielen homonyymejä". In *Språkhistoria och språkkontakt i Finland och Nord-Skandinavien*, edited by Siiri Sahlman-Karlsson, Åke Hansson, Karl-Hampus Dahlstedt, 255–272. Stockholm: Skytteanska samfundet.

Trosterud, Trond. 2006. *Homonymy in the Uralic two-argument agreement paradigms*. Helsinki: Finno-Ugrian Society.

Veenker, Wolfgang. 1975. "Homomorphie im Finnougrischen". *Congressus Tertius Fenno-Ugristarum Tallinnae Habitu* 1: 167–173.

Wojan, Katarzyna. 2003. "The Genesis of Homonymy of the Finnish Language". *Fenno-Ugristica 25:* 180–187.

Wojan, Katarzyna. 2010. *Przypadkowe i nieprzypadkowe wędrówki leksemów*. Gdańsk: Wydawnictwo Uniwersytetu Gdańskiego.

Wojan, Katarzyna. 2014. "An Analysis of the Homonemic Community of the Finnish and Russian Languages". *Studia Rossica Gedanensia* 1: 142–157.

Czech additive numerals in numeral-noun phrases

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Introduction. In the current literature, there are two approaches to their structure. The first of them is He (2015). He claims that additive numerals form constituents, see (1a). The numeral twenty-three is at first formed and then the noun cars is added:

(1) a. [20 + 3] cars → 23 cars
b. [20 ~~cars~~] + [3 cars] → 23 cars

The second approach is Ionin and Matushansky (2006), see (1b). In this theory, additive numerals don't form constituents. The numeral base and the addend form separate constituents with the counted noun. The one connected with the numeral base is elided after forming the whole numeral.

The paper discusses Czech additive numerals and argues that both structures are needed.

Data. In Czech, there are two different patterns for the formation of additive numerals depending on the morphological properties of the addend. The term expresses the part of an additive numeral which is added to the numeral base (e.g. the numeral *three* in the English numeral *twenty-three*). In the first pattern, the addends do not agree with the counted noun in gender and case, see (2a):

(2) a. dvacet dva aut b. dvě auta
20_{NOM} $2_{NOM.M}$ $cars_{GEN}$ $2_{NOM.N}$ $cars_{NOM}$
'twenty-two cars' 'two cars'

The addend in (2a) appears in the nominative masculine, although the counted noun is a neuter and genitive. (2b) shows what the agreeing simple numeral looks like.

In the second pattern, numerals agree with addends in gender and case, see (3):

(3) a. dvaceti dvěma autům b. dvěma autům
20_{DAT} 2_{DAT} $cars_{DAT}$ 2_{DAT} $cars_{DAT}$
'to twenty-two cars' 'to two cars'

In (3a), the addend agrees with the counted noun because both has the dative suffix. In (3b), there is again the illustration of the agreeing simple numeral.

I argue that numerals in each pattern have a different structure. Numerals whose addends agree with the counted noun, don't form constituents and conform to the structure (1b). This pattern is found with addends higher than *one* in the oblique cases.

Numerals whose addends don't agree with the counted noun, form constituents and conform to the structure (1a). With addends higher than *one*, this pattern is found in the nominative, and the accusative. Numerals with the addend *one* (like *dvacet jedna* 'twenty-one') belong to the first pattern throughout their whole paradigm.

I argue that this can be explained under the assumption that deletions in coordinations like (1b) are only possible when the two nouns are identical in number and case. In (4a), deletion is possible, because the numeral *twenty* and the numeral *two* both require an identical shape of the counted noun.

(4)	a.	dvaceti	**autům**	&	dvěma	**autům**	=	dvaceti dvěma autům
		20_{DAT}	$cars_{DAT}$		2_{DAT}	$cars_{DAT}$		
	b.	dvaceti	autům	&	jednomu	autu	≠	dvaceti dvěma autům
		20_{DAT}	$cars_{DAT}$		1_{DAT}	car_{DAT}		

However, when the counted nouns are different (e.g., plural for twenty and singular for one), deletion is impossible and the structure (1a) must be used.

Keywords: Czech additive numerals, internal structure, constituent

References:

He, C. (2015). Complex numerals in mandarin chinese are constituents. *Lingua*(164), 189–214.

Ionin, T., & Matushansky, O. (2006). The composition of complex cardinals. *Journal of Semantics*(23), 315–360.

Ionin, T., & Matushansky, O. (2018). *Cardinals: The syntax and semantics of cardinal-containing expressions*. The MIT Press

Intonation of heritage speakers of Russian

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Heritage speakers (HSs) are speakers who grew up with at least one language acquired at home (heritage language, HL) and a majority language (language of the surrounding society, ML) (Polinsky 2018). Previous research often showed that intonation of a ML can influence a HL (Kim 2019; Robles-Puente 2014). However, some studies demonstrated a general effect of bilingualism in HSs rather than transfer effects (Zuban et al. 2020).

The current talk will present a corpus study on intonation of HSs of Russian living in the US. The overall research question is whether intonation of HSs differs from intonation of monolingual speakers and if it does, in which dimensions of intonation the differences are found (systemic, semantic, realisational, frequency, cf. Mennen, 2015) and how they can be explained.

The study investigates the semi-spontaneous formal (a police report) and informal (a voice message to a friend) narrations of 40 HSs in the US and 40 monolingual speakers of Russian (Language Situations Method by Wiese 2020). The study focuses on the choice of different pitch accent (PA) types, final boundary tones (FBTs), PA placement, and the role of formality, age and gender.

HSs of Russian in the US were reported to frequently produce rising FBTs in statements, contrary to the L%, expected in Standard Russian (Polinsky 2018). Besides, HSs were found to produce more PAs on different constituents than monolingual speakers (Zuban et al. 2020; Zuban et al. forthcoming). Finally, single PAs are usually more common in Standard English while bitonal PAs are more common in Standard Russian (Comstock, 2018).

Intonation was manually annotated applying a combined phonetic and auditory approach. The binomial generalized linear mixed-effects models were used for statistical analyses.

The study showed that HSs and monolinguals were similar to each other in the systemic dimension by having a similar inventory of PAs and FBTs, but the two groups were different in the frequency dimension (e.g., female HSs produced more H* PAs and fewer rising PAs than monolingual female speakers). Formality was important for some intonational patterns, but only for the monolingual speakers and not for the HSs (i.e., more high FBTs and more PAs in the formal situation). HSs and monolinguals differed from each other, but this difference was always modulated by additional factors such as gender and formality (e.g. HSs produced more PAs than monolinguals, but they only did so in the informal situations). Finally, there was a general effect of age and gender similar in both speaker groups (e.g., preference for high FBTs by adolescent and female speakers).

While some results could be linked to the possible transfer from the ML (e.g., the choice of the H* and rising PAs in female HSs) the other results could not. The absence of formality differentiation in HSs can stem from the lack of formal instruction in Russian (in line with Schroeder et al. forthcoming; Alexiadou et al. 2022). An increased number of PAs by HSs can

be a general feature of bilingual speakers (Goble 2016; Zuban et al. 2020; Zuban et al. forthcoming).

Keywords: heritage Russian, intonation, semi-spontaneous speech

References

Alexiadou, Artemis, Vasiliki Rizou, and Foteini Karkaletsou. 2022. "A Plural Indefinite Article in Heritage Greek: The Role of Register." *Languages, 7*(2). https://doi.org/10.3390/languages7020115.

Comstock, Lindy. 2018. "Pragmatic Accommodation and Linguistic Salience in U.S.-Russian Political Interviews." PhD diss., University of California.

Goble, Ryan. 2016. "Linguistic Insecurity and Lack of Entitlement to Spanish among Third-Generation Mexican Americans in Narrative Accounts." *Heritage Language Journal, 13*(1): 29-54.

Kim, Ji-Young. 2019. "Heritage speakers' use of prosodic strategies in focus marking in Spanish." *International Journal of Bilingualism, 23*(5): 986-1004.

Mennen, Ineke. 2015. "Beyond Segments: Towards a L2 Intonation Learning Theory." In *Prosody and Language in Contact*, edited by Elisabeth Delais-Roussarie, Mathieu Avanzi, and Sophie Hermet, 171-188. Berlin Heidelberg: Springer. https://doi.org/10.1007/978-3-662-45168-7_9.

Polinsky, Maria. 2018. *Heritage Languages and their Speakers*. Cambridge: Cambridge University Press.

Robles-Puente, Sergio. 2014. "Prosody in contact: Spanish in Los Angeles." PhD diss., University of Southern California.

Schroeder, Christoph, Kateryna Iefremenko, and Mehmet Öncü. Forthcoming. "The post-verbal position in heritage Turkish. A comparative approach with a focus on non-clausal elements." In *Zweisprachigkeit Deutsch-Türkisch: Studien in Deutschland und in den Nachbarländern*, edited by Zeynep Kalkavan-Aydın and Yazgül Şimşek. Münster: Waxmann.

Wiese, Heike. 2020. "Language situations: A method for capturing variation within speakers' repertoires." In *Methods in Dialectology XVI*, edited by Yoshiyuki Asahi, 105-117. Frankfurt am Main: Peter Lang.

Zuban, Yulia, Tamara Rathcke, and Sabine Zerbian. 2020. "Intonation of yes-no questions by heritage speakers of Russian." *Proceedings of 10th Speech Prosody*, 96-100. https://doi.org/10.21437/SpeechProsody.2020-20.

Zuban, Yulia, Tamara Rathcke, and Sabine Zerbian. Forthcoming. "Do different majority languages lead to different intonational grammars? A case study of yes-no questions in Heritage Russian." *Heritage Language Journal.*