

Western Conference on Linguistics

WECOL 2023 Abstracts

Alphabetized by Last Name

Object Pronoun Alternations in Yemeni Arabic

Mohammed J. Al-Ariqy

The University of Utah

This paper is about the alternation of object pronouns in Taizzi Arabic, a Yemeni variety. This abstract focuses on the 3rd-person singular pronouns. The underlying forms of the 3rd-person masculine and feminine object pronouns are /o/ and /e/, respectively. The masculine pronoun variants are [o], [u], and [w], and the feminine pronoun variants are [e], [i], and [j], see (1). The alternation of these pronouns is triggered by adjacent vowels through assimilation.

(1) Object Pronoun alternation: Third-Person Singular

Masculine	(a) $\text{---} \rightarrow \text{ʔkallim-o/}$ [kallim- o]	(b) $\text{---} \rightarrow \text{ʔkallimi-o/}$ [kallimu- u]	(c) $\text{---} \rightarrow \text{ʔlaaqaj-o/}$ [laaqa- w]
	tell.2.SG.MAS-him	tell.2.SG.FEM-him	meet.3.SG.FEM-him
Gloss	Tell him!	Tell him!	Meet him!
Feminine	(d) $\text{---} \rightarrow \text{ʔkallim-e/}$ [kallim- e]	(e) $\text{---} \rightarrow \text{ʔkallimi-e/}$ [kallimi- i]	(f) $\text{---} \rightarrow \text{ʔlaaqaj-e/}$ [laaqa- j]
	tell.2.SG.MAS-her	tell.2.SG.FEM-her	meet.3.SG.FEM-her
Gloss	Tell her!	Tell her!	Meet her!

The object pronouns in (1a,d) surface faithfully. The masculine object pronoun in (1b) surfaces as [u] following forms ending with the high front vowel /i/ underlyingly. It assimilates with the preceding high vowel in [+high], so it raises from /o/ to [u] while preserving the [+back/+round] feature because there is no [-round] high back vowel in the inventory of Taizzi Arabic. The subject pronoun /i/ assimilates with the object pronoun in [+round] while preserving the [+high] feature. It becomes [+back] because Taizzi Arabic does not have a round high front vowel. So, the object pronoun preserves its [+back/+round] feature, and the subject pronoun preserves its [+high] feature. This is all motivated by the *HIATUS constraint.

The masculine object pronoun in (1c) surfaces as [w] after verbs that end with a glide as in (1c) or a low vowel as in /laaqa-o/ → [laaqa-**w**] ‘he met him’. In (1c), the object pronoun assimilates to the features of the preceding underlying glide /j/ while preserving its [+back/+round] feature, and the glide preceding it assimilates to the features of the object pronoun while preserving the [+high] feature then goes through coercion to satisfy a constraint against word final glide geminates which are not attested in this language.

The feminine object pronoun in (1e) assimilates with the preceding subject pronoun /i/ in [+high]. It preserves its height feature as expected. This assimilation resolves the hiatus and creates a word-final long high vowel. In (1f), the object pronoun assimilates into the preceding glide creating a word-final glide geminate which then goes through coercion to satisfy *FINAL-GLIDE-GEMINATE.

Similar alternations happen with the second-person object pronouns in this language. This paper investigates such alternations from an OT perspective and introduces a new group of object pronouns in an Arabic variety that is totally different from those in Standard Arabic and other Arabic-spoken varieties in the region, thus initiating a new area of study on Arabic varieties where morphology and phonology interact.

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Prince, A., & Smolensky, P. (2004). Optimality Theory: Constraint interaction in generative grammar. *Optimality Theory in phonology: A reader*, 1-71.

Stress according to class: A GHG analysis of stress assignment in Greek nouns

Eirini Apostolopoulou¹, Vassiliki Apostolouda¹, Kosmas Kosmidis¹, & Giorgos Markopoulos²

¹*Aristotle University of Thessaloniki*, ²*University of the Aegean*

Greek stress assignment typically relies on lexical factors, with the last three syllables of phonological words serving as potential stress locations, like ['siziγos] ‘spouse’, [zo'ɣrafos] ‘painter’, [oði'γos] ‘driver’ (Drachman & Malikouti-Drachman 1999; Revithiadou 1999, 2007, etc.). Recent experimental research (Apostolouda 2012, 2018; Revithiadou & Lengeris 2016) has revealed intriguing regularities driven by lexical frequency. In tasks with pseudo-nouns, adult speakers assign specific stress patterns, exhibiting a distinctive preference for APU stress, for instance, in pseudo-nouns ending in *-o* and *-os*, and a tendency for PU stress in pseudonouns ending in *-a* and *-as*. U stress is less favored overall. These tendencies align with the skewed patterns identified in lexical resources such as the Anastassiadis-Symeonidis 2002 *Reverse Dictionary* and the *A(nnotated)-Clean* corpus (Apostolouda 2018, based on Protopapas et al. 2012; <http://speech.ilsp.gr/iplr/downloads.htm>).

Analytical frameworks based on stochastic grammars, which assess the likelihood of specific grammatical occurrences, such as *Noisy Harmonic Grammar* (Boersma & Pater 2016), reveal why APU stress is preferred in certain noun classes. By giving a higher noise value to APU stress, outputs with PU and U stress are penalized. However, a notable limitation of this model arises from its incorrect prediction that adults will favor APU stress, irrespective of noun category, which contradicts the experimental findings. To address this issue, we shift our focus from the phonological constraints to the input and embrace Smolensky & Goldrick’s (2016) *Gradient Harmonic Grammar* (GHG), which generates distinct phonological computations based on input lexical items.

We propose that, within the adult speakers’ internalized lexicon, the URs of nouns encompass intrinsic stress properties imprinted on their class marker, the *theme vowel* (ThV), as illustrated in (1).

- | | | |
|-------------------|--|--|
| (1) a. accented | b. pre-accenting (–1) one syllable to the left (PU stress) | c. pre-accenting (–2) two syllables to the left (APU stress) |
| (U stress) | stress) | (APU stress) |
| * | *–1 | *–2 |
| V _{Th} V | V _{Th} V | V _{Th} V |

The emergence of variable stress patterns, even in nouns with the same ThV, is attributed to the fact that the exponent of a ThV may have different accentual allomorphs, each falling under one of the categories in (1). The probability of each allomorph to get realized is shaped by the underlying level of strength of its stress property. In GSR terms, this is formalized by means of a numerical value called *activity level* (AL), ranging from 0 to 1. Two indicative examples for the allomorphs of the ThVs *-o* and *-a* are given in (2) and (3), respectively, where $x > y > z$:

- (2) a. $*_{AL=z}$ b. $*_{-1AL=y}$ c. $*_{-2AL=x}$
 O_{ThV} O_{ThV} O_{ThV}
- (3) a. $*_{AL=z}$ b. $*_{-1AL=x}$ c. $_{-2AL=y}$
 a_{ThV} a_{ThV} a_{ThV}

The core hypothesis of our proposition centers on the idea that each accentual allomorph of the ThV carries an inherent accent characterized by varying levels of strength. We maintain that the specific ThVs associated with particular noun classes determine accentual activity in a manner that reflects the probability of how stress patterns are distributed within, and consequently across, different noun categories.

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Word Stress in the case of the optional schwa and the word-initial schwa in Hindi

C. Tanuj Barla

Indian Institute of Technology, Delhi

Hindi, an Indo-Aryan language spoken mostly in India, is a bounded, quantity, and rhythm-sensitive language (Hayes, 1995; Pandey 1989, 2021). This paper gives the constraint interaction in Harmonic Grammar framework (Pater, 2008, 2009) to show that the stress system is one of the factors that can account for the schwa-zero optionality at the penultimate syllable in Hindi. I use the weighted constraints over the ranked constraints to show the ganging effects resulting from the adding up of the low-weighted constraints in the language.

1. baḍəl-ō: ~ baḍl-ō: '*clouds*'
 'HLH¹ ~ 'HH
2. L'HLH ~ L'HH
 [ka'ri:gəri:]~ [ka'ri:gri:] '*workmanship*'

Schwas in the string may or may not be foot-heads when occurring as a resolution to bad syllable contact or consonant clusters. This is predictable from the constraint interaction.

Markedness Constraints

- SYLL TROCHEE: Construct left-dominant foot. (Hayes, 1995)
- WSP: Following the weight-to-stress principle, heavy syllables are foot heads. (Prince & Smolensky, 1993)
- ALIGN R: Right edge of every foot coincides with the right edge of the prosodic word. A violation is assigned for every syllable intervening between misaligned edges. (McCarthy & Prince, 1993)
- NON-FINALITY: The prosodic head of the word does not fall on the final syllable. (Prince & Smolensky, 1993)

To accommodate both the quantity and rhythm sensitivity of Hindi, Pandey (2021) uses a constraint, PERFECT GRID (Prince, 1983), which defines within itself three parameters:

- a. Quantity sensitivity: A dominant syllable is equal to or greater in weight than the weaker syllable.
- b. Rhythm: Syllabic Trochee
- c. Directionality: Right to left

¹ L: Light Syllable
H: Heavy Syllable
S: Superheavy Syllable

- PERFECT GRID(TR,S,RL): The dominant syllable within a foot must be equal to or greater in weight than the non-dominant syllable.

Table 1: L'HLH [ka'ri:gəri:] 'workmanship'

LHLH	SYLL TROCHEE	NON-FINALITY	ALIGN R	PERFECT GRID(TR,S,RL)	WSP	Harmonic Values
<i>Weights</i>	1	2	1	2	2	
a. L H (L 'H)	-1	-1				-3
b. L H ('L H)			-1	-1	-1	-4
c. ('L H) L H			-2	-1	-1	-6
d. L ('H L) H			-1			-1
e. (L 'H) LH	-1		-2			-3

Table 2: L'HH [ka'ri:gri:] 'workmanship'

LHH	SYLL TROCHEE	NON-FINALITY	ALIGN R	PERFECT GRID(TR,S,RL)	WSP	Harmonic Values
<i>Weights</i>	1	2	1	2	2	
a. L H ('H)		-1		-1		-4

b. ('L H) H			-1	-1	-1	-5
c. (L'H) H	-1		-1			-2
d. L (H'H)	-1	-1				-3

The goal of this paper is to make a predictable stress-pattern account for the different types of prosodic words with variable stress ('LH ~ L'H, 'S S ~ S'S) including the optional schwa and the word-initial schwas like that of the pattern 'LLLL ~ LL'LL ['ənuməti]~ [ənu'məti], 'permission'.

Word Count: 454

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A Morphological Analysis of Gender in Kannada

Sid Bhushan

University of Illinois Urbana-Champaign

This paper discusses the structural form of morphological gender in Kannada, using an analysis based in Distributed Morphology, drawing attention to theoretical challenges posed by gender in Kannada and its interaction with number and case.

Kannada expresses grammatical gender, with three distinctions in the singular (masculine, feminine, neuter) (1), but only two in the plural (masculine and feminine merge) (2).

(1) a. huḍuga bar-t-a:ne

boy come-NPST-3SG.M

b. akka bar-t-a:|e

sister come-NPST-3SG.F

c. taleno:vu bar-ate

headache come.NPST-3SG.N

(2) a. huḍug-arū bar-t-a:re

boy-PL come-NPST-3PL.RAT

b. akk-andirū bar-t-a:re

sister-PL come-NPST-3PL.RAT

c. taleno:vu bar-ut-ve

headache.PL come-NPST-3PL.N

This mismatch will be a central issue covered in this paper. The other issue is related to the morphological exponence of gender on nouns. Gender markings in Kannada are always inserted prior to case markings. Their presence is conditional on the specific case marker as well as phonological properties of the noun stem (3a-b). Furthermore, gender markings are only present in singular nouns (3c).

(3) a. mara-d-a b. mara-kke

tree-N-GEN tree-DAT

b. mara-kke

tree-DAT

c. mara-ga[-a

tree-PL-GEN

This paper investigates how Distributed Morphology can be used to explain these phenomena.

Kramer (2015) proposes an n-analysis of gender, in which the gender morphosyntactic feature is located on the category-forming head. I extend this analysis to Kannada, proposing separate projections for number and case, as shown in Figure 1. Gender features are present on K, affecting phonological spell-out. This is also conditioned phonologically on the parts of the word that have been spelled out so far. This analysis allows for all of the phenomena in Kannada described above: Different Vocabulary Items (Vis) are present for each combination of gender and case, allowing for optional gender marking based on the case. These Vis are also conditioned on the phonological structure, allowing for the application of morphophonological constraints. I also show that the number constraint on gender exponence is actually morphophonological.

Kramer and Sande (2023) propose the use of the Impoverishment operation, a morphosyntactic operation resulting in the removal of features in certain circumstances, to explain ambigeneric nouns by establishing a “default” gender exponence and using Impoverishment to remove gender features in certain gender-number combinations. I propose an extension of this analysis to explain how the masculine and feminine genders merge in the plural in Kannada. Under this analysis, Impoverishment operations remove masculine and feminine gender features in the plural, erasing the distinction between them. As an example, see Figure 1. When the plural feature combines with nP, Impoverishment occurs and the [-FEM] feature on n is deleted. Then, no gender feature is present, causing no exponence. This is morphophonologically conditioned, as the neuter ending cannot be inserted after the consonant added by the spell-out of the plural feature.

This paper provides further evidence to the validity of Kramer and Sande (2023) by extending their analysis to Kannada. Furthermore, this paper sheds light on some of the grammatical features of Kannada, a language that is highly understudied within the field of linguistics.

Figures

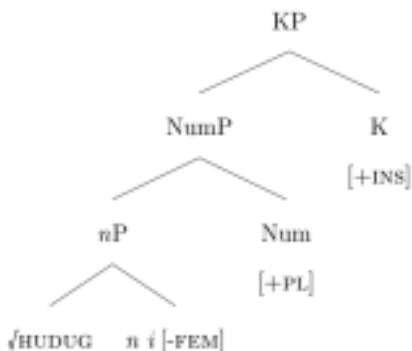


Figure 1: Tree for the word huḍugarinda, meaning “boys” (instrumental case)

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Partial Veridicality at the Lower Interface

Bodhiswatta Biswas¹, Sayantan Mandal²

¹EFLU, India; ²Concordia University, Montreal.

The resurgence of the substance-free program in phonological theory (Chabot, 2019; Reiss, 2007) has reinvigorated the old debate regarding the nature of the relationship between form and substance in phonological theory. One position, radical substance-free phonology (rSFP) holds that primes and their readings are completely arbitrary and any correlation is purely incidental (Chabot, 2019, 2021; Dresher, 2015; Scheer, 2022), and since such arbitrary mappings are language-specific they are also necessarily emergent. Contra rSFP, substance-free phonology (SFP; Hale & Reiss, 2008; Reiss, 2017) maintains that parsing of the speech signal is not possible with a phonological tabula rasa (Hammarberg, 1981) and thus primes must be innate and universal. One consequence of innate and universal primes, it is argued, is that either primes themselves must be substantive (Prince & Smolensky, 2004; Hale & Reiss, 2008) or they must have deterministic interpretations (Volenc & Reiss, 2017). We reject both extreme positions, and argue for a partially-veridical probabilistic phonology-phonetics interface, closely based on, both, Halle's (2005) *designated articulator* (DAX) theory and Poeppel and Idsardi's (2011) *perception-action-memory* (PAM) loop for word-recognition.

Like Halle (2005) we make a distinction between articulator-free major class features ([sonorant]) and articulator-bound features ([labial]). Like SPE (Chomsky & Halle, 1968) we assume that the set of features is finite and universal, with individual features, say [Labial], providing the initial state for the long-term memory system to encode a connection between a motor action and an acoustic maps. Specialized sub-populations of neurons are argued to be hardwired for specific distributions of frequency over time (STRF), affording high-resolution encoding of signals. From these neural versions of spectrograms multiple representations on different scales are constructed in parallel via multi-time resolution processing (Poeppel et al., 2011). For articulator bound features this connection essentially encodes the ability to establish categorical contrasts along the dimensions specific to an articulator – the lips for [±Labial]. The major-class features are articulator-free, and are argued to be correlated with broad phonetic qualities resulting from intra segmental configuration of articulator-bound features. The articulator executing one of these features is called the *designated articulator*, and is assigned as a function of the other feature-bound articulators a segment is specified for. In the direction of EXT(ernalization), we argue that articulator-bound features are interpreted first, with each targeting specific muscles. The specific configuration of the concerned muscles are probabilistically computed, taking into account the antagonistic architecture of muscular system (Lenneberg, 1967) and the intra-segmental specifications of features. Major-class features are then interpreted in a context-sensitive manner, constrained by configuration of intra-segmental bound features. This lends major class features their broad phonetic properties (e.g. sonority, stridence), which are in turn utilized in perception, or INT(ernalization), to make a first-pass estimate of major-class features. These features define what might be called neighborhood *landmarks* (Stevens, 1994) around which conditional probabilities are evaluated to detect bound features.

Crucially, in both EXT and INT *analyses-by-synthesis* as an algorithmic strategy ensures both top-down and bottom-up percolation of information is utilized to constantly resynthesize detected features until a signal-to-lexicon match is attained.

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Universal Boundary Theory: An Old Icelandic Case Study

Bodhiswatta Biswas¹, Sayantan Mandal²

¹*EFLU, India; ²Concordia University, Montreal.*

I discuss the nature of prosodic representations in phonology, focusing on a case study from Old Icelandic (Reiss, 1994). Traditionally, generative phonology assumes that prosodic units are arranged hierarchically into moras, syllables, feet etc. (Nespor & Vogel, 1986). In Old Icelandic, analyses of the conditions put on assimilation and preservation of /r/ in /lr/ and /nr/ sequences appear to necessitate the inclusion of both hierarchical syllable structures as well as node labels within the repertoire of UG (Reiss, 1994).

(1) Environment	UR	SR	UR	SR	Outcome
Stressed Short V.	/sé-l-r/	[sélr]	/sé-l-ra/	[séltra]	Preservation
	/vi'n-r/	[vi'nr]	/vi'n-ra/	[vi'nra]	
Long V./Diphthong	/fu:l-r/	[fu:ll]	/fu:l-ra/	[fu:lra]	Assimilation
	/stein-r/	[steinn]	/stein-ra/	[steinna]	
Short Unstressed V.	/gamal-r/	[gamall]	/gamal-ra/	[gamalla]	Assimilation
	/himin-r/	[himinn]	/himin-ra/	[himinna]	

Reiss (1994) argues that Old Icelandic makes use of a standard syllable template, with the following main caveats:

(2)

- a. Stressed syllables, like long vowels, project a branching nucleus.
- b. Consonants are assigned from left to right to coda positions, provided sonority is decreasing.
- c. In case of an empty x-slot in a branching nucleus, the coda is incorporated under nucleus.
- d. A single unassigned consonant can be assigned to one final appendix position (ONLY).

Given the assumptions in (2), Reiss (1994) argues that prior approaches to constraining feature spreading, such as c command as barriers to assimilation (cf. Steriade, 1988), fail to account for Old Icelandic because here features routinely spread from onset to preceding appendix/coda positions. Rather, Reiss appeals to node labels -- assimilation of /r/ to /l,n/ is blocked when /l,n/ is dominated by N-node. Likewise assimilation is captured in terms of an equivalence class: /r/ → /l,n/ when under C-node. A bare syllable-structure fails to capture this generalization since features regularly spread from codas to following onsets (Reiss, 1994; 335).

I argue that Universal Boundary Theory (UBT; Andersson, 2020), a completely flat prosodic framework that makes no reference to syllable structure or labels, and makes use of a single universal boundary symbol (|), can adequately account for phenomena of the sort seen in Old Icelandic. UBT has no notion of syllables, and conceives of phonological structures as linear strings. Segments are bundles of valued features, and feature bundles are linearly hierarchical – i.e. phonological structures are linear strings of feature-bundles (x-slots, in the old terminology, but without any projections), demarcated by interspersed boundary symbols. Boundary symbols (|) are formally represented by the feature bundle [-segment]. [-segment] has no phonetic reading,

and thus is not externalized. However, it is visible to computations and thus affects the externalization of neighbouring bundles.

(3)

UR |sélr| |sélra| |steinr| |steinra| |gamalr| |gamalra|

Boundary Insertion $\emptyset \rightarrow \{-\text{Seg}\} / \acute{V} L_$ |sél|r| |sél|ra| - - - -

Assimilation /r/ $\rightarrow L / L_$ - - |steinn| |steinna| |gamall| |gamalla|

SR |sél|r| |sél|ra| |steinn| |steinna| |gamall| |gamalla|

Note, also, that this reduction in representational complexity is attained through regular use of conservative formalisms from rule-based phonology. Phonological computations are still UR to SR mappings that operate over feature-bundles, and are extrinsically ordered.

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Toward a metric estimating the impact of initial consonant mutation on neutralisation and contrastivity: a Welsh case study

Florian Breit
Bangor University

Initial syllable faithfulness is a well-established and strong bias against alternations affecting the left edge of the word (e.g. Trubetzkoy 1939, Steriade 1994, Beckman 1998, Casali 1998, Alber 2001, Smith 2002, Barnes 2002, Becker et al. 2012). This is reflected in the disproportionately important role word onsets play in word recognition (Beckman 1998, Smith 2002). As Smith (2002) argues, such initial alternations must, if anything, improve recognisability, e.g. by increasing prominence for the parser.

Initial Consonant Mutation (ICM) (see Iosad 2014 for a cross-linguistic overview) presents a significant departure from these generalisations. In Welsh, ICM triggers numerous changes affecting both sonority and major class features: /tad/ ‘father’ can surface as radical [tad], nasalised [tʰad], spirantized [θad], or voiced [dad]; occasionally entire onsets are obliterated, e.g. /gair/ ‘word’ can surface as [air]. ICM systems typically target a significant proportion of underlying consonants and potentially apply to most words in the language. The potential for word-initial neutralisation (e.g. /dant/ ‘tooth’ and /nant/ ‘brook’ can both surface as [nant] in the same environment) is substantial, with correspondingly significant effects on word-recognition expected. This can be seen from Fig. 1, illustrating all surface to underlier mappings in Welsh CV(C) forms.

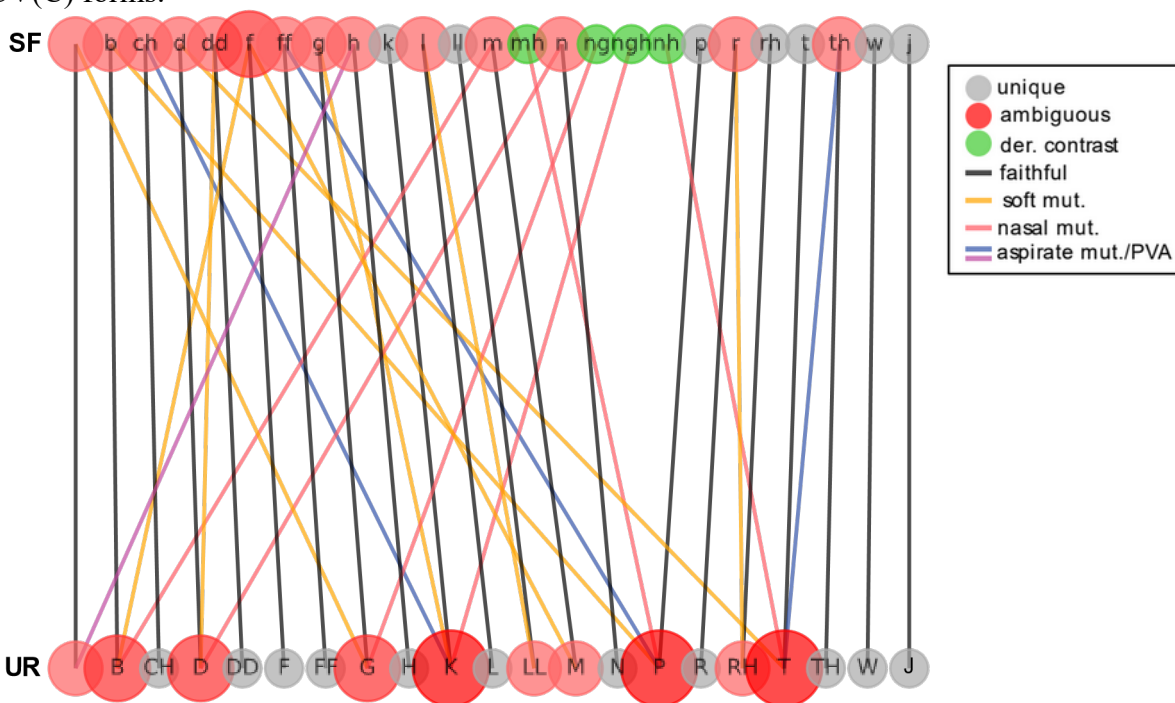


Figure 1: Network graph showing mappings of underlying singleton initial Cs to possible singleton initial Cs in Welsh, with neutralised (ambiguously mapped) forms shown in red and derived surface contrasts in green.

Archangeli et al. (2014) showed that some Scottish Gaelic speakers produce incomplete neutralisation, and Ussishkin et al. (2017) showed Scottish Gaelic listeners to be biased against

consideration of mutated forms. There is however currently no metric to assess the potential neutralising effect of ICM, and the fact that derived contrasts can be generated (green circles in Fig. 1) has also been neglected. To investigate this, two measures are adopted. The Neutralising Capacity (NC) score in (1) estimates the effect of ambiguous mappings impacting upon recognition, while the Contrastive Capacity (CC) score estimates the effect of morphophonologically unambiguous derived contrasts.

$$(1) \quad NC = \frac{|\mathbb{F}_{rad} + \mathbb{F}_{mut}| - |\text{supp}(\mathbb{F}_{rad} + \mathbb{F}_{mut})| + |\mathbb{F}_{rad}| - 1}{|\mathbb{F}_{rad}|}$$

$$(2) \quad CC = \frac{|\mathbb{F}_{mut} - \mathbb{F}_{rad}| + |\mathbb{F}_{rad}| - 1}{|\mathbb{F}_{rad}|}$$

These measures give a ratio of mutated surface forms that lead to neutralisation/novel contrast with a radical/underlying form to the radical/underlying forms in a bipartite graph of underlying and surface forms (cf. Fig. 1).

As shown in Table 1, the application of such measures to the “abstract” Welsh inventory (essentially assuming equal distribution of all Cs) compared to actual lexical data from two open Welsh dictionaries (Vangberg 2021, Donnelly 2013) reveals that the actual NC shrinks as larger amounts of the language’s lexical distribution are taken into account as opposed to the NC of the abstract system. Conversely, CC grows with the size of the lexicon.

Source	<i>n</i> - Radicals	<i>n</i> - Mutated	<i>n</i> - Neutralized	Prop. Neutralized	NC	CC
Inventory	24	21	12	50%	0.583	0.292
OpenCeltDict	15224	24533	312	2%	0.050	1.583
Eurfa	168575	288324	1677	1%	0.015	1.695

Table 1: Neutralisation and contrastiveness measures for Welsh based on the consonant inventory and two open dictionaries.

This suggests that speakers may mitigate negative impact on word recognition via a bias against potentially neutralising underlying representations at the point of lexicon formation, which in turn might at least partially explain the well-known but highly understudied phenomenon of ‘exceptional non-mutation’ (cf. e.g. Breit 2019:221-282).

Word Count: 492

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Two types of "soft g" in Turkish

Göktuğ Börtlü¹ & Tobias Scheer²

¹Selçuk Üniversitesi, ²Université Côte d'Azur, CNRS 7320

Turkish is known for having an item called soft g, represented as ğ in spelling. We show that there are two types, ğ1 and ğ2. In this talk, we analyze the workings of ğ1 and, depending on time constraints, ğ2.

Synchronically, soft g is only relevant when occurring morpheme-finally, where it produces alternations when suffixes are added. ğ1 never appears on the surface as a segment or a feature, but betrays its existence by i) causing the preceding vowel to lengthen (vowel length is distinctive in Turkish) and ii) preventing suffix-initial consonants from being realized. Thus when a ğ1-final root such as /dağ1/ 'mountain' is realized by itself in Nom case, it appears as [daa] with a lengthened vowel. That the vowel is lexically short is shown by the Acc [da-i]. The Acc marker is -(j)I (where I stands for a harmonizing vowel, note that there are many more suffixes of this kind), and the yod is realized after V-final roots as in [araba-ji] 'car Acc', while it is absent after C-final roots as in [dʒam-i] 'glass Acc'. Note that Turkish allows for CC clusters, and that there are also suffixes where the initial C is stable (like pl. -lAr).

Although V-final on the surface, ğ1-final roots behave like if they were C-final: the yod is absent, as in the aforementioned [da-i] 'mountain Acc'. We conclude that the phonological identity of ğ1 is extra syllabic space, an empty CV unit in the sense of Strict CV (Lowenstamm 1996, Scheer 2004) : thus the lexical shape of ğ1-final roots is shown under (1b). When unsuffixed, the root-final vowel spreads to the empty nucleus, thus producing [daa].

The initial yod of the Acc marker (1a) is floating. When attached to a V-final root (1c), the yod associates to its own C. After C-final roots (1d), a sequence of an empty V followed by an empty C is created (grey-shaded). Empty VC units are known to be removed from the representation, and this is possibly universal (reduction, Kaye & Gussmann 1993). Thus after reduction, the yod has nowhere to go and remains afloat, thus unpronounced. Reduction also occurs after ğ1-final roots (1e), thus the floating yod cannot attach to its own C. It cannot attach to the empty C of the root (in orange) either because this C, like the floating yod, is attached to its own x-slot and an x-slots cannot attach to another x-slot (this is reminiscent of the workings of h aspiré in French, Clements & Keyser 1983). Finally, the root vowel cannot spread because its target, the empty V, is eliminated by reduction.

(1)

a.	b.	c. V-final stem	d. C-final stem	e. ğ ¹ -final stem
Acc -(j)I				
C V	C V C V	C V - C V	C V - C V	C V C V - C V
		↑		
x x	x x x x	x x x x	x x x x	x x x x x x
j I	d a	ara b a j i	dʒa m j i	d a j i

The desiderata for this pattern is i) the lexical presence of extra syllabic space in ġ1-final roots, with this space, however, ii) disallowing for the presence of iii) suffix-initial consonants that alternate with zero. i) could be done with moras or other items representing extra syllabic space. The representation of iii) as floating Cs appears to be the obvious solution in an autosegmental environment, and its appearance then needs to be regulated by some mechanism. But ii) begs the question. Other than the solution based on x-slots (in addition to syllabic constituents) shown, one could think of a dummy segment attached to the empty C under (1b), which by its presence will prevent the floating C to attach. This is the solution in the traditional literature (and also mimics the diachronic origin of ġ1 as a consonant), but the segment will somehow have to be muted and, crucially, association lines will cross when the root vowel spreads. Another option is turbidity (Goldrick 2001, Cavirani 2022): a consonant is associated to the empty C under (1b), but remains unpronounced because it only has a belonging association line, the pronunciation line being absent. This improves on the previous solution, but still faces the line crossing issue.

We show that the other type of soft g, ġ2, offers evidence in favor of the x-slot-based analysis. ġ2 is a morpheme-final -k that alternates with zero, the alternation being conditioned by the kind of suffix attached.

Word Count: 675

Word stress effects on syllable onset in Brazilian Portuguese

Maria Cantoni & Vitor Antonio Prado

Federal University of Minas Gerais

This study addresses duration patterns related to word stress in Brazilian Portuguese. In Portuguese, word stress may fall in one of the last three syllables of the word and is acoustically related to syllable lengthening. However, available studies have examined the syllable nucleus or the whole syllable (e.g. Cantoni 2019; Cruz et al. 2016; Moraes 1998), but not the onset. One reason for this is that previous studies in other languages have shown the rhyme to carry the main acoustic and perceptual correlates of stress (e. g. Fry 1955 for English; Sluijter and van Heuven 1995 for Dutch; cf. van Heuven 2018 for a review). Traditionally, it has been assumed by metrical theories (e.g. Halle and Vergnaud 1980; Hayes 1985) that stress placement refers to the syllable rhyme, and not to the onset, and this premise is related to the notion of syllable weight. However, studies have shown that the onset may be relevant to stress placement in some languages (Davis 1988, Everett and Everett 1984). Further, it has been argued that the onset may also contribute to the syllable's overall sound and weight and that the alleged metrical unimportance of the onset is not grounded on empiric data (Topintzi 2010). In this study, experimental data was used to test to what extent the consonant in a syllable onset is affected by stress. The data set evaluated in this study was gathered in an experiment carried out with 10 Brazilian Portuguese native speakers, who were asked to produce words with similar CV syllables in stressed or post-stressed positions (e.g. *sofá* [so'fa] “sofa” and *fofa* ['fofə] “cute”). Eight pairs of words containing fricatives, nasals and stops in syllable onsets were examined in final and non-final phrase position. The data was fit to a linear mixed model, determined with a model selection procedure, having stress level, consonant manner and voicing and phrase position as fixed factors and participants and words as random factors. Results show that, in stressed syllables, not only nuclear vowels but also onset consonants are longer than in post-stressed syllables, with a significant main effect of stress on consonant duration. Consonantal lengthening impacts all consonants, regardless of manner and voicing. Therefore, both onset and nucleus are broadly affected by stress lengthening, and not only the rhyme, as traditionally assumed. This finding implies that the effect of stress on subsyllabic units should be regarded as language specific and supports the importance of supplementing phonological theory with empirical evidence.

Word Count: 419

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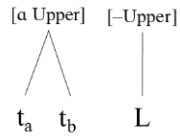
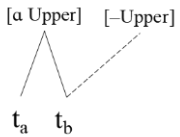
Distinction of Unstressed Tones in Mandarin Chinese

Jarry Chia-Wei Chuang
University of Connecticut

Introduction. In Mandarin Chinese, a neutral tone (Tone 0, T0) is generally regarded as the byproduct of syllable weakening. It is usually short and light (Cheng, 1973; S. Xu, 1983), toneless or atonic (Dow, 1972), or pitchless (C. N. Li & Thompson, 1989), which lasts half of a standard syllable (Cheng, 1973; Dreher & Lee, 1968; Zadoenko, 1958). As the syllable is usually monomoraic and unstressed, I consider the so-called T0 to be unstressed tones (T_{US}).

Data. Based on the morpho-syntactic and morpho-phonological operations, we discuss several types of TUSs. Type I is for bound morpheme. Suffixes, like *zi* and *tou* (1a-b), are affixed to free morphemes (e.g., *zhuō* ‘table,’ *shí* ‘stone,’ *yǐ* ‘chair,’ *dù* ‘belly’). Similarly, duplications (1c-d) should be considered bound, for attaching to the base. Unstressed conditions also allow morphologically reduced forms to be part of TUS (1e-f). TUS in Type I are low tones except that proceeded by T3. Type II (2a-d) includes several types of grammatical markers, phrase-final but not sentence-final, in which the preceding tone value spreads to the TUS syllable and the register feature is linked to the spread TUS. Type III (3a-g) includes sentence final grammatical markers or functional morphemes, in which tones have been fixed to high or low in low register and do not involve third-tone sandhi. Tones of Type IV (4a-d) are derived from the second syllable of the source lexical item, as noted by Liang and Wee (2022).

Morpho-phonological Operation. Type I: TUS has a low tone value linked to low register. Some used to consider tone spreading to better account for the influence of the front syllable on TUS, while it is convinced here that such influence should be phonetic, i.e., tonal coarticulation. **Type II:** TUS is atonic. The preceding tone spreads to the TUS syllable, with [-Upper] marked, and thus the high-low distinction is given from t_b but the register value is decided itself. **Type III:** TUS of SFPs has a meaning distinction between high and low in low register; therefore, we suggest that TUS here should be grammatical tones with [-Upper]. **Type IV:** In some variants of Mandarin, the second syllable within a disyllabic word can be unstressed, in which it has the original tone, being reduced into monomoraic, TUS here is derived from the tone value in stressed conditions.

Type I	Type II
Bound Morphemes & Morphological Reduced Forms	Grammatical Marker I: Non-SFP Markers
	
Type III.	Type IV
Grammatical Marker II: SFPs	Derived T _{US}



Grammatical Function of TUS. Sentential moods in Chinese are prosperous in sentence-final positions, like S.AspP, AttitudeP, etc. High-low tone distinction in low register is employed to discriminate grammatical differences, suggesting there are grammatical tones in Mandarin Chinese.

Conclusion. The paper examines the phonological operation and the grammatical function of TUSs in Mandarin Chinese. We argue not all the TUSs are atonic, except Type II. TUSs can have a fixed underlying tone (Type I), high-low tone distinction (Type III), or tones derived from stressed conditions (Type IV). Third-tone sandhi works out later than tonal derivation from underlying to surface. We further suggest Mandarin should have two grammatical tones.

Appendix

Type I	1.	a.	T1 + TUS → HH + L	zhuō zi ‘table’
		b.	T2 + TUS → MH + L	shí tou ‘stone’
		c.	T3 + TUS → LL + M	sǎo sao ‘aunt’
		d.	T4 + TUS → HM + L	dì di ‘young brother’
		e.	T2 + TUS → MH + L	qiáng shàng ‘on the wall’
		f.	T3 + TUS → LL + M	wǎn shàng ‘at night’
Type II	2.	a.	T1 + TUS	HH + M tā de shū ‘his book’ →
		b.	T2 + TUS	MH + M xíng de zhèng ‘walk straight’ →
		c.	T3 + TUS	LL + M měi měi de ‘beautifully’ →
		d.	T4 + TUS	HM + L kàn zhe tā ‘looking at her’ →
Type III	3.	a.	T1 + TUS → HH + M	Tā shì bù xǐ huān kàn <u>shū de?</u> ‘He doesn’t like to read?’
		b.	T1 + TUS → HH + L	Tā shì bù xǐ huān kàn <u>shū de.</u> ‘He doesn’t like to read’
		c.	T2 + TUS → MH + M	Tā shì hěn xǐ huān zhè shū <u>fáng de?</u> ‘She loves the study room?’
		d.	T2 + TUS → MH + L	Tā shì hěn xǐ huān zhè shū <u>fáng de.</u> ‘She loves the study room’

- e. T3 + TUS → LL + M *Zǒu ma* ‘Let’s go?’
 - f. T3 + TUS → LL + L *Zǒu ma* ‘Let’s go!’
 - g. T4 + TUS → HM + M *Ràng tā qù ba* ‘Let him go!’
 - h. T4 + TUS → HM + L *Ràng tā qù ba*
 ‘(We possibly) let him go?’
-

- Type IV** **4.**
- a. T1 + TUS HH + H *gāo xìng* ‘happy’
→
 - b. T2 + TUS MH + H *yán jiū* ‘research’
→
 - c. T2 + TUS MH + L *dǎ shòu* ‘bouncer’
→
 - d. T4 + TUS HM + L *zhào gu* ‘take care’
→
-

An artificial language study of stress learning by English and Spanish monolinguals

Megan Crowhurst¹, Linda Wheeldon³, & Allison Wetterlin²

¹University of Texas at Austin, USA; ^{2,3}University of Agder, Norway

An interesting corner of the stress typology is populated by stress systems in which unbounded quantity-sensitive (QS) and quantity-insensitive (QI) patterns interact. In default-to-same-edge systems, stress occurs on the right-/leftmost heavy syllable (H; the QS pattern), else on the light syllable (L) at the same word edge (the QI pattern). In default-to-opposite systems, the aligning edge for the QI and QS patterns are opposite. This classification is controversial and the existence of the default-to-opposite category, in particular, is debated. ^[1, 2] *We probed the naturalness of default-to-same and -opposite patterns in an artificial language study with native English and Spanish speakers.*

A *length perception test* probed participants' ability to discriminate vowel length differences, as this was the basis for the L/H distinction in stimuli. Then, in a *training phase*, participants learned (i) an edge-neutral QS "rule" and (ii) an edge-aligning QI "rule". For (i), training with trisyllables containing one long vowel (HLL e.g. *ká:poke*, LHL *topé:ke* and LLH *pætoká:*) taught that H attracts stress. Forms with multiple long Vs were withheld during training, so participants could not learn whether the QS rule was left-/right-aligning. For (ii), half the participants were taught a left- and the other half a right-aligning QI rule (stress the initial/final syllable in LLL, e.g., *páteko/patekó*). Learning was measured by accuracy in a *test phase*; participants heard different stress pronunciations for new trisyllables matching the trained QI/QS categories and decided which pronunciation was "legal". Missing "hold-out" forms with two Hs were added in the test (HHL, HLH, LHH). Here, deciding which of two stress pronunciations (e.g. *ké:pe:ta* vs. *ke:pé:ta*) was "legal" forced participants to infer an edge for the QS rule. We were interested to know if participants' inferences would reference the trained QI edge, a default-to-same strategy, or rather the untrained edge (default-to-opposite). We also wanted to know whether QI edge training would influence accuracy for the trained QS categories.

Key results:

- Most participants (89% in each language group) achieved better-than-chance accuracy in the length perception test (Fig. 1). This finding for Spanish is a novel contribution.^[3]
- Right-/left-edge QI training was associated with learning asymmetries in the test. The right-trained groups (both languages) were significantly more accurate for LLL (Fig. 2, orange bars). Right-edge training may have improved accuracy for LLH with H at the trained edge (Fig. 2c-d, teal) and muted sensitivity to length in other positions (Fig. 2c,d, purple, mauve). Accuracy for LLL was lower in the left-trained groups (Fig. 2a,b), but accuracy for HLL, with H at the trained edge, was better than chance (Fig. 2a,b).
- Hold-out categories: the Spanish group preferred stress on a peripheral H when the syllable at the opposite edge was L; this tendency was stronger in the right-trained group (Fig. 3b,d, rust, green). In the English groups, stress on the H closer to the trained edge was preferred for HLH (Fig. 3a, c, orange) and LHH (green; esp. in the left-trained group).

Full details and implications will be discussed in the paper.

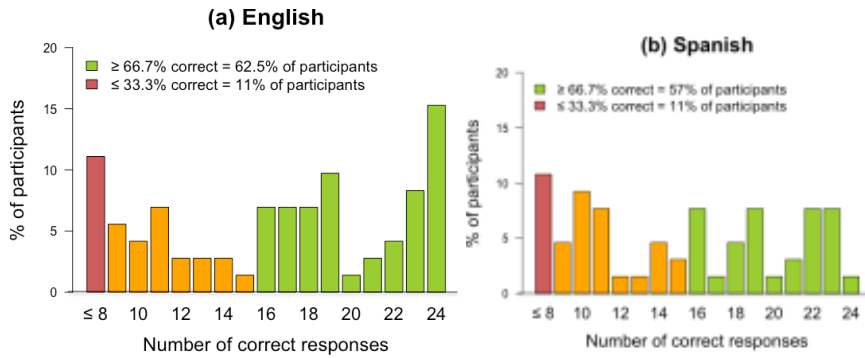


Fig. 1. Number of correct responses by % of English ($n = 72$) and Spanish ($n = 65$) speaking participants in the length perception test.

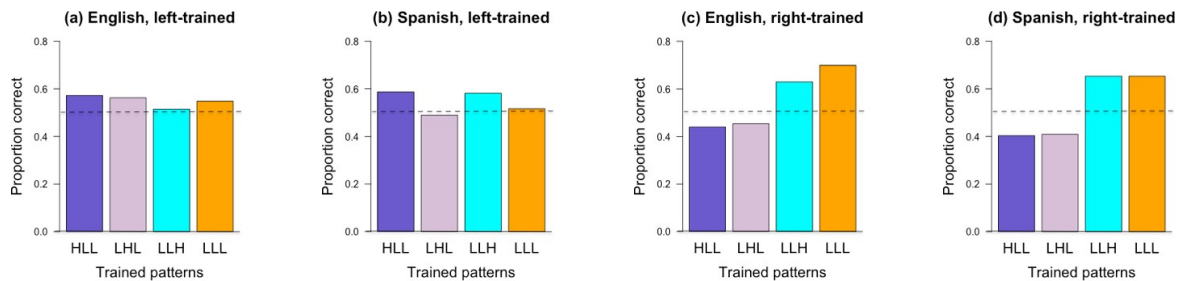


Fig. 2. Proportion correct for pronunciation pairs matching trained categories in the test phase.

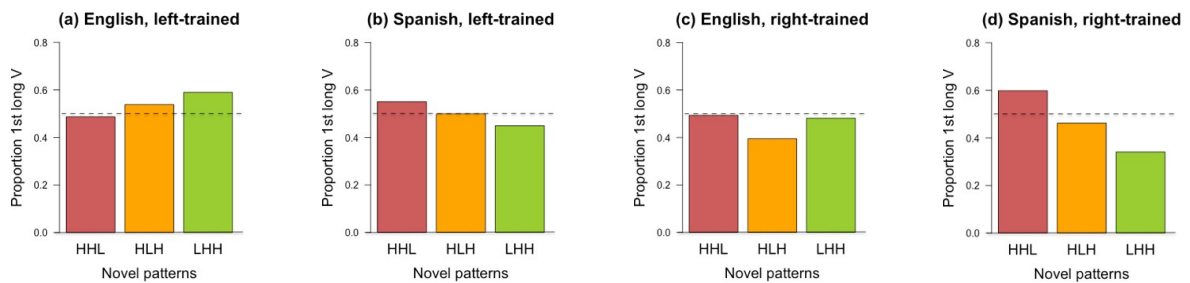


Fig. 3. Proportion correct for pronunciation pairs matching hold-out categories in the test phase.

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Front-back asymmetry in Bantu vowel harmony: an instance of coronal asymmetry

Jian Cui

Harvard University

Introduction. The *front-back asymmetry* (Hyman, 1999) in Bantu can be summarized as follows: back target vowels only harmonize for height with another back vowel, whereas front target vowels can harmonize with both front and back trigger vowels. To account for the peculiar behavior of the *back target* under a target-centric view, Nevins (2010) treats front and back height harmony in Bantu as two separate sister processes and explicitly defines back height harmony as a manifestation of parasitic harm only where the back height harmony in Bantu is parasitic on the feature [+round]. However, such an account leads to very language-specific assumptions. The following issues arise: (i) it would be unnecessary to postulate a split for front/back height harmony in languages without the asymmetric pattern; (ii) it is hard to determine what feature- parasitism the back height harmony is contingent on; and (iii) it is unclear what motivates the parasitism of height and backness/roundness-related features, i.e., are there any underlying phonemic or phonological reasons for these assumptions? This paper seeks to provide a trigger-centric account for the *front-back asymmetry*, aiming to understand the restrictive strength of the *front trigger*. By examining three Bantu languages- Kikuyu (E.51), Kimatuumbi (P.13), and Shona (S.11), we model the front-back asymmetry as coronal asymmetry and propose a representational analysis assuming underspecified and asymmetric feature representations (based on FUL Lahiri 2018). Based on these assumptions, a single constraint (based on representations of all Bantu vowel inventories) is postulated relevant for all Bantu languages with a *front-back asymmetry*.

Data. The key manifestation of the asymmetry is a unique type of disharmonic pattern. In Kikuyu, the disharmonic string [ε...o] (compared to unattested [ε...ɔ]) is found in both roots and stems (cf. Table1), resulting from the front mid trigger [ε] failing to instigate harmony in [o]. Similar disharmonic strings [e...u] (not *[e...o]) and [ε...u] (not *[ε...ɔ]) are observed in Shona & Kimatuumbi, respectively. We observe that coronal triggers like [ε] are more restrictive in terms of whether they can instigate harmony in dorsal vowels, but dorsal triggers spread harmonic features in an unrestricted manner (see Table1). The pattern exhibits traits of *coronal asymmetry* which features place assimilation: Coronals (i.e., /n,t,d/) cannot override the place of the following consonant, changing labials/dorsals into coronals, but dorsals can always spread their place to coronals (cf. *rainbow* > *rai[mb]ow* but not *amtrack* ≠> **a[nt]rack*).

Trigger\Target	ε	ɔ
ε	ε...ε	ε...o
ɔ	ɔ...ε	ɔ...ɔ

Table 1. Tongue Root harmony in Kikuyu

Proposal. To account for the *coronal asymmetry* found in both place assimilation and Bantu height harmony, we resort to i) underspecification of [COR] feature, which is well reflected in Featureally Underspecified Lexicon (FUL) (Lahiri & Reetz, 2002; 2010; Lahiri 2018), and ii) an ARTICULATOR (ART) matching procedure leading to a match/mismatch asymmetry. To be more specific, in FUL, [COR] is universally underspecified but [DOR] is always specified.

Such an asymmetric ART representation further underlies an ART matching procedure with three possible results – MATCH, MISMATCH and NO MISMATCH. Crucially, a blocking effect on Bantu harmony is triggered only when a MISMATCH condition is yielded, resulting in the disharmonic vowel sequences in question.

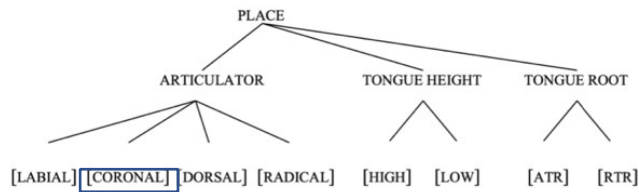


Fig.1 Shared Place features for consonants and vowels in FUL (Lahiri & Reetz, 2010:46)

Analysis. Despite surface differences, the three disharmonic strings obtained in Kikuyu, Kimatuumbi, and Shona share the same underlying pattern – they all consist of a [COR] trigger and a [DOR] target but never the opposite pattern. Assuming underspecification of [COR], the facts fall out by assuming an asymmetric feature representation. I use Kimatuumbi data for an illustration – the underlying representations of Kimatuumbi triggers and targets are shown in Table 2. Following Goldsmith (1976), I propose that harmony is realized by spreading the harmonic feature from the trigger to the target and/or deleting the feature of the target if it is lexically required to be specified for the feature. For Bantu, which is normally formalized as Tongue Root (TR)/Tongue Height (TH) harmony, an additional match/mismatch asymmetric procedure for the ARTICULATOR features of vowels should be implemented prior to the active harmony process. In case of Kimatuumbi (see Fig.2), [DOR] (trigger) does not mismatch unspecified [COR] (target), but [COR] (trigger) mismatches specified [DOR] (target).

Kimatuumbi	triggers		Targets	
Features	/ε/	/ɔ/	/i/	/u/
ARTICULATOR (ART)				
CORONAL	√		√	
DORSAL		√		√
TONGUE ROOT (TR)				
ATR			√	√
TONGUE HEIGHT (TH)				
HIGH			√	√

Table 2. Kimatuumbi triggers and targets in FUL: underlying representations (shading indicates underspecification)

In Fig.3, the deletion of [ATR] and [HIGH] should have occurred to achieve the TR & TH harmonic string [ε...ɔ]; however, the [COR] (trigger) mismatches the specified [DOR] (target) and blocks the TR & TH harmony procedure, leading to a surface disharmonic [ε...u] sequence in Kimatuumbi. For the other three matching conditions, no blocking effect on harmony is triggered and harmonic sequences can be observed as are expected (Fig.1). A general ART constraint based on the matching procedure is postulated:

The unidirectional ART mismatch ([COR]-≠[DOR]) between the trigger and the target blocks the potential spreading and/or deletion procedures for the harmony in the language.

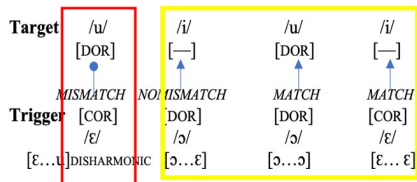


Fig.2 ART matching paradigm for Kimatuumbi

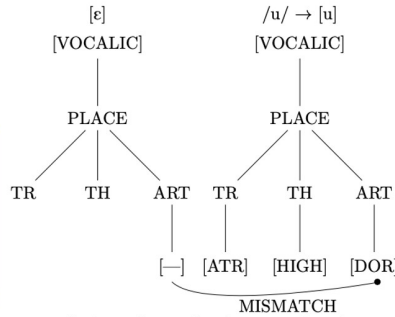


Fig.3 Implementing harmony in Kimatuumbi

Conclusion.

- i) Under the trigger-centric approach, front-back asymmetry is fundamentally an instance of *coronal asymmetry*, which calls for the underspecification of [COR]. Consequently, this underspecification underlies the match/mismatch asymmetry for the ART matching procedure, which has been experimentally proved (e.g., Cornell et al., 2013).
- ii) The *front-back asymmetry* in Bantu can therefore be seen as an inherent part of their phonological systems, assuming universal underspecification of [COR] and the resulting asymmetric ART feature representations of vowels.
- iii) The ART-related blocking effect on TR/TH harmony reflects the predominance of ART features in Bantu height harmony and echoes with the notion of ‘*place of articulation first*’ in acquisitional studies (Ghini, 2001; Fikkert & Levelt, 2008).
- iv) Asymmetric ART feature representations (assuming predominance of ART) lead to both asymmetric place assimilation and asymmetric height harmony in Bantu, yielding a unified analysis for both.

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Clausal pied-piping in Albanian: Recursion, cyclicity, and cross-clausal extraction

Colin Davis

University of Konstanz

Introduction: I analyze configurations in Albanian involving dramatic clausal displacement. All data is from fieldwork with a native speaker of the little-analyzed Gheg dialect of Albanian, spoken in and around Kosovo. Albanian constitutes a distinct branch of the Indo-European family, and like many languages in this group, it has *wh*-movement. In Albanian *wh*-movement from an embedded clause can extract just the *wh*-phrase (1a), or the entire embedded CP that contains it (1b):

- (1) ‘What does Fortesa think that Qendresa stole?’
- a. **Qka₁ po kuiton Fortesa [(se) Qendresa ka vjedh t₁]?
 What thinks Fortesa that Qendresa has stolen**
- b. **[Qka₁ (se) Qendresa ka vjedh t₁]₂ po kuiton Fortesa t₂?
 What that Qendresa has stolen thinks. Fortesa**

I argue that this pied-piping is fed by successive-cyclic movement through/to the edge of the embedded CP—something expected if CPs are *phases* (Chomsky 2000, 2001, a.o.). I show that this analysis also correctly predicts massive multi-clausal pied-piping in Albanian.

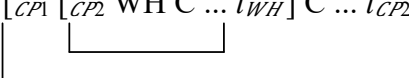
Data: In Albanian clausal pied-piping is possible with all *wh*-phrases and for all forms of A-bar movement. Though word order in Albanian is flexible (Joseph 2018), by default it is SVO. In clausal pied-piping examples like (1b), the object moves to the front of the displaced embedded clause. Fronting the embedded clause without moving the *wh*-phrase to its edge is unacceptable (2):

- (2) [(√Qvar torte) se Fortesa e don (*qvar torte)] ti kuiton?
 (What cake) that Fortesa like (what cake) you think?
 ‘What cake do you think Fortesa would like?’

Strikingly, when there are two embedded CPs, it is possible to pied-pipe the lowest CP to the front of the intermediate CP, and then pied-pipe them together to the edge of the first:

- (3) [_{CP3} [_{CP2} [_{CP1} Qfar torte osht e mir]₁ fmit kan me than t₁]₂ po kuiton Fortesa t₂]?
 Which cake is good kids will say thinks Fortesa
 ‘Which cake does fortesa think that the kids will say is good?’

Analysis: If CP is a phase, *wh*-extraction from an embedded clause as in (1a) must involve movement to the specifier of the embedded clause before movement into the main clause. I propose that after such intermediate movement to the embedded clause’s specifier, in Albanian it is possible to instead pied-pipe the entire embedded clause with the *wh*-phrase to the specifier of the main clause, as we saw in (1b), schematized in (4):

- (4) [_{CP1} [_{CP2} WH C ... t_{WH}]₁ C ... t_{CP2}]


Since this clausal pied-piping is fed by movement of the *wh*-phrase to the specifier of the pied-piped CP, the *wh*-phrase must be initial within that CP (2). See Arregi (2003) for similar phenomena in Basque, and Heck (2009) for analogous (non-clausal) pied-piping patterns in other languages.

Importantly, we can derive examples like (3) by recursively performing the same operations: the *wh*-phrase moves to the specifier of the lowest CP, then pied-pipes that CP to the edge of the intermediate one, and finally pied-pipes both of those lower CPs to the edge of the main clause. Extensions: I go on to show that this analysis naturally explains a variety of related word order possibilities in Albanian. I also address the cross-linguistic variation in clausal pied-piping, which is attested in languages like Albanian and Basque, but is banned in many others.

Word Count: 496 words

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For better or for worse: An analysis of allomorphic variation in Polish anticausative deadjectival verbs

Joshua Dees, Anna Romaniuk, & Katie VanDyne
University of Illinois Urbana-Champaign

Background: On the topic of suppletion in comparatives and superlatives, Bobaljik (2012) proposes the containment hypothesis, suggesting that the representation of the comparative is contained within the superlative (as in (1a)).

- (1) a. [[[ADJECTIVE] COMPARATIVE] SUPERLATIVE]
b. *[[ADJECTIVE] SUPERLATIVE]
(Bobaljik 2012: 4)

Bobaljik (2012) extends the containment hypothesis to deadjectival verbs, positing the Comparative-Change-of-State Generalization (CΔG), defined in (2) and illustrated in (3a).

- (2) CΔG (Bobaljik 2012: 171): If the comparative degree of an adjective is suppletive, the corresponding change-of-state verb is also suppletive.

- (3) a. [[[ADJECTIVE] COMPARATIVE] V_Δ]
b. *[[ADJECTIVE] V_Δ]
(Bobaljik 2012: 171)

Problem/Research Question: As noted in Bobaljik (2012), causative and anticausative deadjectival verbs in Polish challenge this generalization. In (4), the suppletive adjective pair *dobry* – *lepsz-y* ‘good – better’ corresponds to the causative (4a), anticausative (4b), and inchoative (4c).

- (4) a. *u-lepsz-yc* (causative) ‘to make something better’
b. *po-lepsz-yc się* (anticausative) ‘get better’
c. *dobrz-eć* (inchoative) ‘get better’
(Bobaljik 2012: 204)

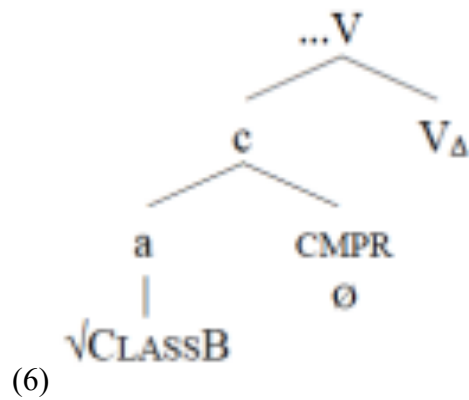
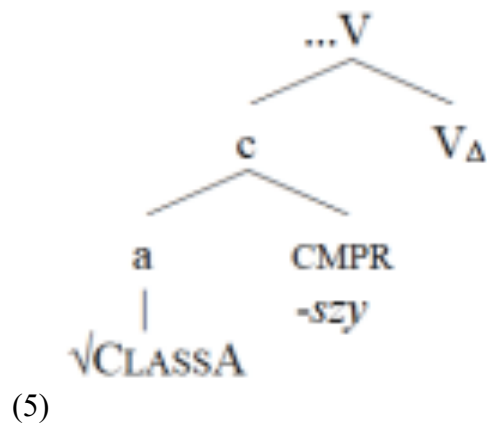
The causative (4a) and anticausative (4b) surface with the comparative, **lepsz-y**, which conforms to the CΔG. The inchoative (4c), however, surfaces with the adjectival root **dobr-y**, a counterexample to the CΔG.

Proposal: We argue that syntactic and semantic differences suggest the presence of different vocabulary items in the causative/anticausative deadjectival verbs and the inchoatives. We propose that, unlike the anticausative, the inchoative stem does not contain the suppletive comparative, but rather a null comparative allomorph, thus the inchoatives do not violate the CΔG.

Analysis: Alexiadou et al. (2015) propose different classes of anticausatives distinguished by differences in their projection of Voice. The presence or absence of Voice is analyzed as a lexical requirement encoded on the root, suggesting the existence of two different roots for the two different classes. We adopt Bondaruk’s (2021) conclusion that Polish ‘się’ anticausatives (4b) are best accounted for with the structure proposed for Alexiadou et al.’s Class A anticausatives, those with marked anticausative morphology (się) projecting Voice with an expletive specifier. We add that, on the other hand, inchoatives like (4c), having no marked anticausative morphology, represent Alexiadou et al.’s Class B anticausative lacking Voice. We

will show how this division is further supported by the Polish verbs displaying expected behavior for Alexiadou et al.’s two classes by correlating with different conceptualizations of spontaneity (Rościńska-Frankowska 2012), as well as frequency of use.

Crucially, we argue that only the root of Class A anticausatives in Polish selects the suppletive comparative allomorph, resulting in an ABB pattern (4b). The inchoative stem of the Class B anticausative selects for a null comparative allomorph (cf. Bobaljik (2012) on ‘to cool’ examples) and the change-of-state verb (the inchoative) accordingly is not suppletive (4c). This comparative form alone cannot be realized, a case we suggest is not unlike the English perfect – *perfecter – to perfect. Since the inchoative derivation never contains the suppletive comparative form, the patterns are unproblematic for Bobaljik’s CΔG. The representation we suggest for Class A anticausatives is shown in (5), whereas Class B anticausatives (the inchoatives) follow the derivational path in (6).



Word count: 500 words

The Chaski Phoneme Project

Michael Dorin
University of St. Thomas

Documenting endangered languages is formidable as it is a very time-intensive task. This problem is particularly vexing for research projects with limited resources. Automation can help, but because of the limited raw phonetic data available, creating tools to perform automated documentation is challenging. This problem is solved with crowdsourcing. The Chaski Phoneme Project permits volunteers worldwide to record their voices speaking phonemes from the International Phonetic Alphabet (IPA). The project's objective is to capture diverse voices producing phonemes, and it has been up and running for several months.

Inspiration for this program came from work performed in the mid-1980s by a group of students from the University of San Marcos in Lima, Peru. The San Marcos study focused on the documentation of the Urarina language. Two researchers in this were Judith Cajas and Beatriz Gualdieri, who created a collection comprising audio recordings and handwritten notes [1]. The phonemes selected to be gathered by the Chaski Phoneme Project came from the need to review the documentation of these recordings.

The project is written in Java using Spring Boot. Spring Boot is a popular framework for developing Java applications that are easy to create, test, and deploy. It provides several features that make it ideal for this undertaking, such as its autoconfiguration capabilities [2]. The Chaski Phoneme Project uses MongoDB for the storage of persistent data. The user interface for the Chaski Phoneme Project is simple and easy to use, allowing participants to listen to an audio sample of an IPA phoneme and then record themselves repeating it. The fully functional system can be found at <https://www.chaski-linguistics.org>.

The Chaski Phoneme Project, using crowdsourcing, is a promising new, cost-effective approach to gathering data for producing tools for linguists. Crowdsourcing allows the creation of recordings from vast numbers of volunteers worldwide. The project is still in its early stages but has already collected over 1,100 recordings from volunteers residing in five countries. The source code and collected recordings will be released publicly in the fall of 2023, allowing other researchers to use the project to create tools for documenting endangered languages.

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Versatile *hawj* in Zhuang: A unified account

Wenjiu Du

Leipzig University

The problem

While the polyfunctionality of GIVE has been investigated cross-linguistically, its syntactic category has been largely left unaccounted for or vaguely treated as a co-verb. Moreover, there lacks a unified syntactic analysis to fully capture the prototypical transfer event denoted by GIVE. This study is designated to fill this gap by examining the *hawj* ‘give’ constructions in Zhuang, an understudied Tai language spoken in southern China.

Semantic typology of *hawj* constructions

Drawing on novel data from fieldwork, I show that *hawj* can assume multiple uses as well-attested in other Southeast Asian languages (e.g., Yap & Iwasaki 1998; Thepkanjana & Uehara 2008; Jenny 2015), including the ditransitive use in **double object constructions**, the causative, permissive, passive uses in **preverbal domains**, and the goal, benefactive, malefactive, purposive uses in **postverbal domains**.

Syntactic account for *hawj* constructions

Hawj as a verb throughout

Following Lin & Huang (2015), I claim that *hawj* behaves as a verb in all its uses, contra Li & Thompson (1981) and Bisang (1996), as evidenced by four morphosyntactic tests: (1) *hawj* can take aspectual marker, (2) *hawj* can be modified by the negation marker *mbouj*, (3) *hawj* fails to head a PP that is moveable, and (4) *hawj* is not equivalent to the preposition *to* in dative alternation test (Her 2006).

Towards an analysis

I argue that the polysemy of *hawj* is structurally rather than lexically triggered. The verbal status of *hawj* endorses a generalized ditransitive analysis proposed by Lin & Huang (2015), i.e., various uses of *hawj* can be derived from the original ditransitive use with a transfer sense instantiated by a Larsonian structure where *hawj* is a ditransitive verb taking two internal arguments.

In double object constructions, there are two word orders: (i) Agent > Recipient >(modified) Theme, (ii) Agent > (non-modified) Theme > Recipient. In (i), *hawj* as a mainverb projects a VP, with the recipient as the Spec of VP and the theme as the complement of VP. The verb *hawj* is then moved to the head of upper light verb. As for (ii), I argue for Simpson’s(2001) predicate-raising, which yields the inverted order. That is, the subject as the Spec of *v*P moves to the Spec of VP and the recipient as the Spec of *hawj* moves to the Spec of FocP in the sentence final position. Then the VP moves to some functional projection above AspP.

In preverbal uses, *hawj* takes an IP-complement in all instances. It renders causative interpretations in a strong sense (the causative use) and a weak sense (the permissive use). When the matrix subject in the causative-permissive case is put into a caused or permitted event as an affected participant, it leads to the passive reading.

In postverbal uses, the goal use is derived from an NP-taking *hawj* functioning as a secondary predicate. The benefactive use again involves predicate raising (Simpson2001) where the VP complement of *hawj* undergoes remnant movement. In the malefactive use, *hawj* serves as the head of a verbal compound. The purposive *hawj* is actually the causative-permissive *hawj* embedded in a clause.

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Using Autism Quotient Scores to Predict Second Language Phonetic Trait Imitation Ability

Madison Dunlap, Dr. Ji Young Kim

UCLA

Autism quotient (AQ) scores, which reflect the amount of autistic-like traits an individual possesses, can be used to assess phonetic imitation abilities; in a recent study, researchers found that individuals with higher AQ scores, specifically on the subscale of attention switching, performed better on phonetic imitation tasks. (Yu, Abrego-Collier, and Sonderegger; 2013). While this trend is observed when phonetic imitation tasks are conducted in speakers' first language, it is unclear whether this extends to second language acquisition. In the following study, we aim to fill this gap in the literature by evaluating the performance of individuals with varying AQ scores on phonetic imitation tasks in a foreign language. We evaluate their performance on such tasks via the voice onset time (VOT) of consonants /p/, /t/, and /k/ in Spanish words. The first and last task involve reading a list of Spanish words (30 of which begin with /p/, /t/, or /k/, and 30 of which have other word-initial consonants, repeated three times each, for a total of 180 words) aloud. In the immediate imitation task, participants hear and repeat the same word list, in a different order, read by a native Spanish speaker. Because individuals with Autism Spectrum Disorders (ASD) tend to be more attentive to detail, we predict that those with higher AQ scores will be better at imitating the phonetics of a foreign language than their lower-scoring peers. Interestingly, there was a significant negative correlation between the attention to detail subscore and the difference in VOT value between the first and third tasks; this may suggest that the individuals with higher AQ scores already picked up on the proper production of these Spanish consonants, perhaps subconsciously, and, thus, did not have to correct their production of these consonants much between the two tasks. This relationship between AQ score and phonetic imitation ability is directly relevant in understanding bilingual language acquisition in ASD and may have future implications in how we approach both teaching autistic children second languages and raising autistic children in bilingual environments.

Word Count: 336

References:

Yu, A. C., Abrego-Collier, C., & Sonderegger, M. (2013). Phonetic imitation from an individual-difference perspective: Subjective attitude, personality and "autistic" traits. *PloS one*, 8(9), e74746.

A Phonological Account of the -rV Suffix in Urhobo
Philip Oghenesuowho Ekuigbo
National Institute for Nigerian Languages, Aba, Nigeria

Abstract

The -rV suffix marks temporal specification in the Urhobo language (Aleh, 2021; Onvbiona, 2016), a Niger-Congo language spoken in Nigeria. This process is, however, restricted to certain verb forms. From a morpho-syntactic perspective, it has been argued that the simple past tense in Urhobo with transitive verb roots does not take an -rV suffix (Onvbiona, 2016). While this restriction is well established in the literature, attention has not been paid to possible phonological constraints also playing a role in the restriction of this affix in Urhobo. This study seeks to argue that the process of suffixing -rV in Urhobo is also restricted to bases with certain phonological configurations. In Urhobo, the -rV suffix applies to only CV verbs. Elugbe (1973, 1989) and Aziza (2006) argue that this behavior suggests that CrV structures in Urhobo are underlying CVCV given that CVCV structures do not also take this suffix. According to Elugbe (1989), the possible syllable structures in Urhobo therefore are V and CV; thus, instances of CCV in which C2 is /r/ are underlyingly CVCV. He further claimed that the two V-elements are identical vowels; thus, V1 gets elided if the first consonant is labial or velar. However, instances of CVCV in which V1 and V2 are identical without V1 deletion despite meeting the deletion conditions stated, such as kere ‘count’, yoro ‘hawk’, yere ‘feed’, gere ‘bend’, among others abound in the language. We therefore argue that this restriction results from a configuration constraint that allow certain morphological processes to occur only in unmarked forms. Accordingly, the apparent behaviour of CrV formatives, in which they do not take the -rV suffix, does not therefore suggest that CrV is underlyingly a CVCV structure, as previously argued.

Keywords: -rV suffix, phonological constraints, markedness, syllable, Urhobo

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What's optional about optional imperative truncation in Modern Hebrew?

Noam Faust

Université Paris 8, CNRS SFL

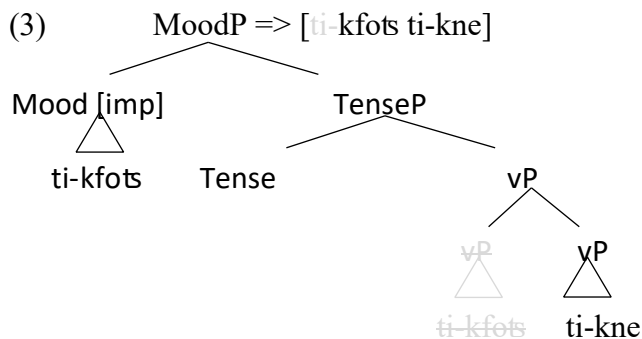
In Modern Hebrew, the imperaive mood can be expressed using the same form as the future (1a). It can also be expressed in a truncated version of this form, without the person prefix (1b, Bat-El 2002). In other words, imperative truncation (IT) is optional. In this talk, I ask whether this optionality is phonological, morphological or syntactic.

I bring forth the hitherto unnoticed interaction of IT with the “serial” imperative construction in (2), in which a motion verb precedes another verb, without conjunction (similar to but much more productive than English *go get*, Bjorkmann 2016). In this construction, both verbs can be truncated or non-truncated (2a,b), or only the first, motion verb can be truncated (2c); but the opposite is ungrammatical (2d).

- (1) a. ti-kfots ‘you_{msg} will jump’ or ‘jump_{msg}!’
 b. kfots ‘jump_{msg}!’
- (2) a. ti-kfots ti-kne bira
 b. kfots kne bira
 c. kfots ti-kne bira
 d. *ti-kfots kne bira
- } ‘jump (over) and buy beer’

I claim that the facts in (2) are best accounted for by assuming that truncation is *categorical* when a verb is in the head of MoodP; only that *V movement to MoodP is optional*. In other words, the optionality is syntactic, not phonological.

The syntactic tree in (3), based on Alcázar & Saltarelli’s (2014) proposal for imperative verbs, corresponds to the asymmetric (2c). The motion verb has moved to MoodP. As a result, it undergoes IT. To account for (2a,b), it suffices to assume that neither or both verbs move to MoodP respectively. But (2d) is impossible to derive. For only the second verb to undergo truncation, it would have to move above the motion verb; this would yield the wrong order **kne tikfots*.



An account relying on phonological optionality cannot explain the asymmetry between (2c) and (2d), because it cannot incorporate the hierarchical relation between the two verbs. In turn, a morphological account in terms of optional agreement would predict the opposite asymmetry. Since the motion verb is higher, it should be the trigger of agreement – therefore ruling out (1c), where the 2p prefix occurs on the target but not on the trigger.

I proceed to show that my account is compatible with Kramer’s (2023) account of the lack of 2p prefixes in the imperatives of another Semitic language, Amharic. In that account, the non-realization of the prefix is related to feature haplology between the 2p feature inherent to imperative mood and that of the verbal form. The Modern Hebrew facts are problematic for this account, *unless* one incorporates the proposal that in this language syntactic movement to MoodP is optional. Finally, the logic proposed here for the blocking of truncation in (2d) is shown to parallel Kramer’s explanation for the reemergence of the 2p prefix in prohibitives (negative imperatives).

Word Count: 479

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Italian Stress: a non-ternary account in Strict CV metrics

Noam Faust¹ & Shanti Ulfsbjorninn²

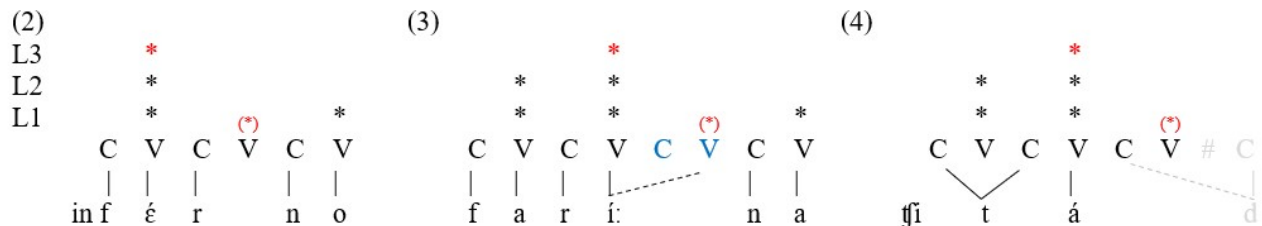
¹Université Paris 8, CNRS SFL, ²Memorial University of Newfoundland

Background and aims: Italian stress is anchored right and interacts with syllable weight. Words are generally vowel-final. If a word ends in three light syllables (LLL), then stress may be penultimate or antepenultimate (1a,b). Penultimate and antepenultimate stress occurs for HLL words, too (1c,d). Only penultimate stress is possible in LHL-final words (1e). All vowel length is derived, and stress incurs lengthening of light syllables (1a-c; antepenultimate lengthening is phonetically variable). Closed syllables are not lengthened (1d,e). Exceptionally, the final vowel can be stressed in words of all shapes (1f). It is not lengthened; but such final stress does trigger consonant gemination in the following word (1g).

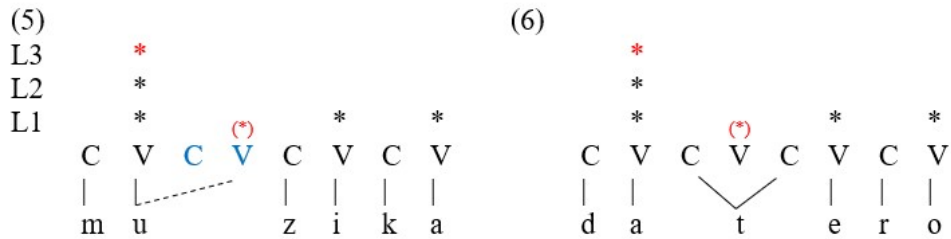
- | | |
|-------------------------------------|---|
| (1) a. /farina/ → [fariːna] 'flour' | e. /inferno/ → [infɛːrno] 'hell' |
| b. /musika/ → [mú(:)zika] 'music' | f. /fitta/ → [fittá] 'city' |
| c. /dottore/ → [dottóːre] 'doctor' | g. /fitta doro/ → [fittá-ddóːro] 'city of gold' |
| d. /dattero/ → [dáttero] 'date' | |

Previous ternary approaches suffer from having multiple foot types (trochees, dactyls) (Bafle 1996). Alternatively, Krämer (2018) proposes a recursive, ternary, moraic foot, but runs into difficulties with [dá_μt_μte_μro_μ] and stressed final vowels, which do not stress the antepenultimate mora. We propose an alternative account within Strict CV metrics (Faust & Ulfsbjorninn 2018), without syllables, moras or feet as primitives of the representation.

Analysis: Strict CV Metrics builds a metrical grid directly on the V-slots (Vs) of a strictly alternating C&V skeletal tier. Contentful Vs project to L2 and empty Vs project to L1. A languagewide condition states that final Vs, while contentful, also only project to L1. The projections of empty nuclei are grouped with those of preceding V-slots ("Incorporation", in red); consequently, the latter project to L3. The algorithm stresses the last V-slot projecting to L2, which must be made to project to L3. In (2), the last legitimate V-slot already projects to L3 through incorporation. In (3), the last legitimate V-slot is made to project to L3 through the insertion of an additional CV (blue) and the incorporation of its grid-mark. Words with final stress are lexicalized with an additional, final empty CV (4). Accordingly, final stressed vowels are actually penultimate in the skeleton; since they project to L2, they are legitimate stress-bearers. The empty CV cannot be filled by the vowel, but it is independently inferable from the Sandhi gemination (grey).



Forms such as [mú(:)zika] (5) and [dáttero] (6) are lexically marked as exceptions: their penultimate vowel projects only once, to L1, and is not a legitimate stress-bearer. Other than that, nothing needs to be added.



Advantages: This system is computationally linear. It operates from the right edge, without feet or ternarity. It makes both regular and irregular stress depend entirely on the status of the penultimate V-slot (the locus of regular stress). All things being equal, penultimate stress will obtain. Final stress only *appears* final – it is in fact penultimate; and antepenultimate V is stressed only when the penultimate V is unstressable. Stressed open syllables lengthen, unless final.

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Complexities in Manchu Phonology: Recent Segmental Variations and Suprasegmental Exploration of Sanjiazi Village Dialects

Songjun He

University of Oxford

The study explores the phonology of the critically endangered language Manchu, which served as the Qing dynasty's official language. Even though the Manchu language has a writing system, most of the few remaining speakers are illiterate in Manchu, living in the Sanjiazi village in northeastern China. The village's last Manchu speakers are bilingual in Manchu and Mandarin, which belong to the Tungusic and Sino-Tibetan language families, respectively.

The following issues are addressed through the data collected in the Sanjiazi village in July 2023. Firstly, the current Manchu phonological inventory is updated, with feature analyses following the Featurally Underspecified Lexicon model (Lahiri & Reetz, 2010). The inventory reflects significant differences between written and spoken Manchu, as well as rapid changes among the last speakers in recent decades. For example, the Sanjiazi dialect is reported to have adopted a different infix <-lo-> in the 1980s (Ji et al., 1989). Thus, the written form <doho-šo-mbi>, meaning “limp”, was pronounced as /dohələmə/. However, the suffix <-mbi> is found missing in the same word collected in 2023. Also, the /h/ shifts to /g/, as observed in a variety of word positions, resulting in the pronunciation /dögələ/. In addition to morphophonological changes, the growing Manchu affricate inventory reflects influences from Mandarin. For the first time, the voiceless alveolo-palatal affricate /tɕ/ has been found in words such as /tɕia.kʰə/ ‘very’ and /tɕian.tɕʰi.kʰun/ ‘sweet’.

Secondly, the research investigates aspects that remain unchanged, namely the Manchu phonological grammar and how it incorporates loanwords into its native system. Particularly interesting is the discovery of specific tonal mappings when tonal Mandarin words are borrowed into non-tonal Manchu. For example, the first syllables in the Mandarin words /toʊ.fu/ ‘tofu’, /lei.ku/ ‘rib’, and /mai.tsu/ ‘wheat’ all carry the High-Low tone. Surprisingly, speakers accept the High tone only for the first syllable in the Manchu adaptation. This suggests that Manchu has a more complex suprasegmental system than previously claimed (Huang, 2001). Therefore, the current research not only contributes suprasegmentally-marked data, but also investigates areas beyond aspects such as stress (Joseph, 2018). For example,

the first syllable of the word /tɕia.kʰə/ ‘very’ can only take a High tone, whereas the first syllable of the word /tɕian.tɕʰi.kʰun/ ‘sweet’ carries a non-negotiable High-Low-High tone. The current study attempts for the first time to present this non-trivial feature and approaches an analysis that highlights the relationship between the tonal features and the Manchu hierarchical suprasegmental structure.

In conclusion, the research examines the variations of Manchu spoken by the last generation of speakers. The most recent data shows the current changes in spoken Manchu under the influence of Mandarin. Meanwhile, the study also demonstrates features that cannot be changed in endangered Manchu through loanword adaptation. Suprasegmental features are reported and analysed, demonstrating its potential for future research. Through this, the study thrives to enrich discussions on endangered languages, language contact between language families, and suprasegmental phonology.

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On the Japanese multiple Case-marking construction

Mayumi Hosono

Keio University

By discussing the Japanese *multiple Case-marking* construction (Kuno 1973), this paper suggests that the cross-linguistic variation in syntactic structure is more limited than considered so far. Three nominals, *bunmeikoku* ‘civilized country’, *dansei* ‘male’ and *heikin-zyumyoo* ‘average life span’, can all be marked by the nominative Case marker *-ga*, as illustrated in (1). On the traditional assumption that the nominative Case is associated with a subject, this construction appears to have more than one subject. Note that *heikin-zyumyoo* ‘average life span’ is a semantic/logical subject of the sentence, with *bunmeikoku* ‘civilized country’ and *dansei* ‘male’ modifying it; see the English translation.

- (1) Bunmeikoku-ga dansei-ga heikin-zyumyoo-ga mijika-i.
civilized-country-NOM male-NOM average-life span-NOM short-PRES
‘Males’ average life span in civilized countries is short.’

Chomsky (2000) proposed the syntactic operation called *Agree*, in which the uninterpretable ϕ -features of a functional head are valued by the interpretable counterpart of a nominal and the uninterpretable Case of the nominal is valued by the head. On this assumption, it is not expected that the same Case appears on multiple nominals as illustrated in (1): at most one nominal could be assigned a Case value from a head in the Agree operation. Proposing a specific syntactic mechanism and/or theoretical assumption, the overall claim by the literature (e.g. Hiraiwa 2001, Saito 2016) is that Japanese can yield a language-particular syntactic structure such as the multiple Case-marking construction, which amounts to claiming that the human language faculty allows an individual language to produce a syntactic structure quite different from other languages.

We show the followings concerning the multiple Case-marking construction: i) despite the same morphological Case marking, the nominals located in higher positions are actually topics, whereas the nominal located in the lowest position acts as a formal subject/object; and ii) though multiple nominals can appear in any order, the topical status of the nominals located in higher positions does not change, whereas the interpretation of the nominal located in the lowest position differs depending on whether it is marked by *-ga/-o* or by *-wa*. We argue that only the lowest nominal occupies a structurally designated position (Rizzi 2016), proposing that in Japanese, a functional feature of a head structurally licenses the morphophonological form of a (Case) particle that appears on the sentential element located in a designated position, which process does not involve ϕ -feature agreement. It is suggested that since only one nominal is located in a designated position and enters a syntactic relation with a functional head both in Japanese and in languages such as English, it is not the case that Japanese yields a language particular syntactic structure such as the multiple Case-marking construction.

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Cognitive capabilities of ants: ants' command of the concepts underlying first- and second-person

MJ Jaurena

California State University Fresno

Following an evolutionary approach to Universal Grammar (UG) forces us to question how ancient the rudimentary elements of language are (Tattersall 2014). Exploring the extent other animals have innate command of fundamental linguistic knowledge will further our understanding of UG, as presumably that knowledge forms the basis of UG in humans. This paper argues the concepts underlying first- and second-person are evident in a variety of ant species' engagement in sustained, dyadic cooperation.

In several interactions - self- and allo-grooming, nest-building, tandem running, and social carrying - ants must recognize themselves as first-person selves interacting with a conspecific, a member of their same species, second-person self for some shared task (Keefner 2016). For any dyadic interaction to be successful, both participants must act having realized and integrated the other's second-person status alongside their own first-person status (Hurford 2007, de Bruin 2012). Dyadic interactions require an individual ant's action is not made in a vacuum but is performed after the understanding of what itself, 'I', and its conspecific, 'you,' are doing.

Ants' ability to differentiate between and participate in both self- and allo-grooming reflects particular cognitive depth usually not recognized in insects (Reber *et al.* 2011). For an ant to groom itself, it must be able to draw the line between self and other such that 'I' am grooming 'me' and not 'you' (Golston 2016). Similarly, when two ants groom one another, they recognize they are not grooming themselves but each other, categorizing their world into the rudimentary elements behind 'I', 'you', and 'we.'

In tandem running, ants play opposite roles, leader and follower, where each is a separate self that can take on varying roles and productively interact with an opposite role (Franks & Richardson 2006). Leaders must think 'I' am guiding 'you' to a new food site; followers must think 'you' are guiding 'me,' clearly differentiating between the two.

Reminiscent of the intricacies of second-person cognition in tandem running, social carrying is a physically complex process where one ant is transported to a new nest location on another ant's back (Dahbi *et al.* 2008). To carry another, one must separate oneself from one's conspecific: first- from second-person. Two selves participate in social carrying, each carrying their own and their conspecific's understanding of the situation. For if 'I' am carrying 'you' and 'you' are being carried by 'me', 'we' jointly are participating in this shared task.

That 'you' and 'I' are accomplishing 'our' task is most obvious in *Oecophylla smaragdina* interactions, who build their nests through a combined effort of leaf-positioning and gluing (Hölldobler & Wilson 1983). Taken altogether, nest-building involves 'I's, 'you's, and 'we', meaning individuals take both in-task and out-task conspecific second-person selves into account.

Ants cultivate their world through second-person cognition, engaging in dyadic interactions between selves that obligate first and second-person classification from each ant. The elements of UG, therefore, may be present in animal cognition. Exploring this further would enrich our understanding of the fundamental linguistic concepts ants possess, providing a milestone in UG's development.

Word Count: 496 words

Desire Predicates in Bangla and their embedded clausal dependencies: A pragmatic interlude

Samir Karmakar & Debadatta Roychowdhury
Jadavpur University

The present work concerns an interesting dichotomy that is observed in Bangla (Bengali: Indo-Aryan) that revolves around the desire predicate *itʃitʃʰe* ‘desire’. In Bangla the desire predicate *itʃitʃʰe* can occur in isolation and it can also occur with the light verb *hɔwa* ‘happen’ resulting in NV conjunct *itʃitʃʰe hɔwa* ‘the desire happens’. Following the literature on complex predicates (Chatterjee, 2014), (Butt, 2010) Bangla has composite verb (nonverb plus verb) formations where the light verb occurs with a noun, adjective, and adposition. The work will majorly focus on the distinction between the bare verb *itʃitʃʰe* ‘wish’ and its occurrence with the light verb forming *itʃitʃʰe hɔwa*. The distinction between them involves their embeddability properties i.e. the clausal complements they select. The desire predicate *itʃitʃʰe* and *itʃitʃʰe hɔwa* takes a subjunctive as its clausal complement. The contrast is reflected in the form of the subjunctive, observe the examples below.

- (1) *amar_i itʃitʃʰe ami_i tʃakri-ta tʃʰere di*
I.GEN desire I.NOM job-CLF leave give.SUBJN.1
‘It is my desire that I leave this job.’
- (2) *amar_i itʃitʃʰe hɔ-e ami_i tʃakri-ta tʃʰere di*
I.GEN desire happen-PRS.3 I.NOM job-CLF leave give.SUBJN.1
‘I feel like I leave this job.’
- (3) *amar_i itʃitʃʰe anil_i tʃakri-ta tʃʰere di-k*
I.GEN desire anil.NOM job-CLF leave give.SUBJN.3
‘It is my desire that Anil leaves this job.’
- (4) **amar_i itʃitʃʰe hɔ-e anil_i tʃakri-ta tʃʰere di-k*
I.GEN desire happen-PRS.3 anil.NOM job-CLF leave give.SUBJN.3
‘I feel like Anil leaves this job.’ (A very inadequate translation)

In example (4) the predicate *itʃitʃʰe hɔwa* is not consistent with the clause type where the subject of the embedded clause and the matrix clause are not the same person, but can only occur in a situation where both the subjects are co-indexed as seen in (3). Whereas, the lexical predicate *itʃitʃʰe* can occur in both the contexts (1) and (2). The problem arises when the [-uk] marker of the subjunctive appears in the subordinate clause. If we notice minutely then we can say that the [-uk] marker occurs when the subject of the embedded clause is not the same as the subject of the matrix clause. We have considered the sentential force or ‘illocutionary force’ of both constructions. We claim that the predicate *itʃitʃʰe* signifies two illocutionary forces. When *itʃitʃʰe* occurs in a situation where the desire of the speaker (S) is communicated towards the speaker (S) in (1), the predicate conveys an ‘expressive’ illocutionary force. On the contrary, when *itʃitʃʰe* is employed in a context where the desire of the speaker (S) is directed towards the hearer (H), then it exerts an ‘indirect directive’ force. On the other side of the table, *itʃitʃʰe hɔwa* can only convey an ‘expressive’ illocutionary force, as it cannot occur in a context where the desire of the speaker (S) is directed

towards the hearer (H). We substantiated our claim by delving into the syntax of pragmatization following Rizzi (1997). In Figure (1) where *itʃʃʰe* functions as an indirect directive [+ID], the force head of the Force Phrase will have the feature of [+ID]. In figure (2), the force head of the Force Phrase will have the feature [+E] when *itʃʃʰe hɔwa* delivers an ‘expressive’ force.

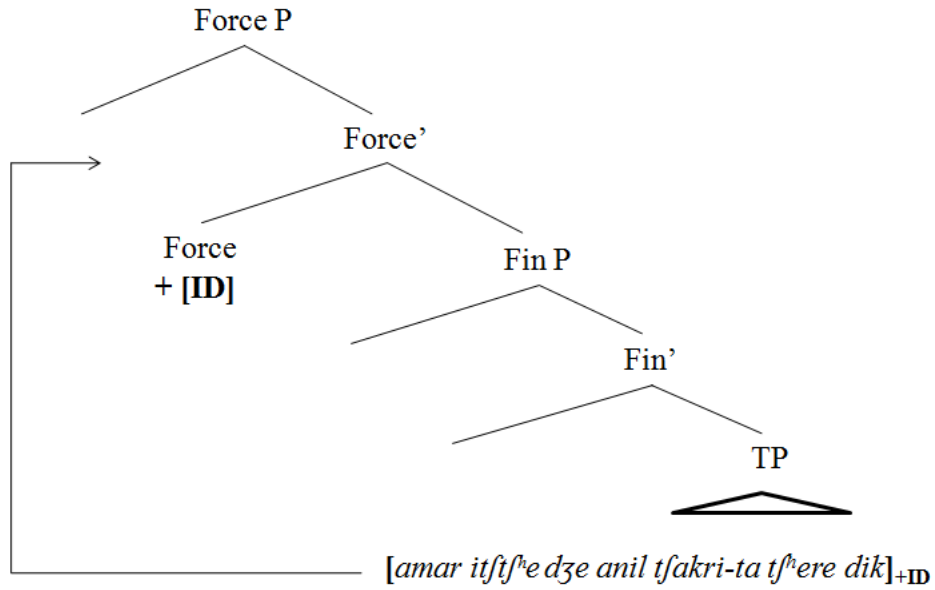


Figure – (1)

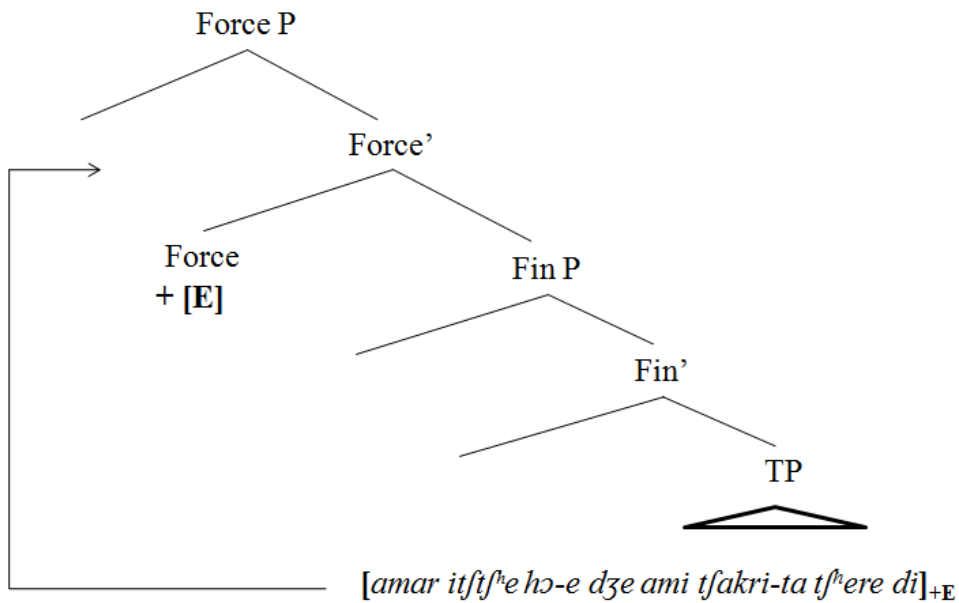


Figure – (2)

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Contextual anaphora information in English N'-ellipsis

Jong-Bok Kim & Seulkee Park

Kyung Hee University

This study aims to investigate head noun ellipsis in English, a phenomenon where an NP lacks its head noun or more than the element (N'-ellipsis) but still takes its determiner in the elliptical NP domain (Lobeck 1993, a.o.). This elliptical NP tends to occur where its antecedent has a parallel structure, as illustrated in (1):

- (1) a. Susan likes [her big red fish] with a stripe and Tom likes his with spots.
b. [This copy] is defective but the other two are fine. (Payne and Huddleston 2002: 416)

In (1a), the meaning of the possessive remnant *his* can be recovered as 'his big red fish' based on its putative antecedent NP *her big red fish*.

Previous studies have debated whether the noun ellipsis is derived by deletion of a copy of an antecedent (cf. Ross' (1967) *one*-pronominalization and *one*-deletion) or whether the ellipsis is based-generated with empty structures discussed by Jackendoff's (1971) analysis of empty N as PRO. Saab (2018) claims that the nominal head undergoes head movement to a functional head within the DP. However, our empirical investigation indicates that such structure-based approaches are challenged by the flexible uses of the construction.

To check the uses of N-bar ellipsis in real-life as well as the validity of the previous analyses, we have performed a corpus investigation. We extracted manually selected 400 tokens from corpora². Schematizing the annotations with variable tags in a dataset, we have evaluated a statistical significance.

Our authentic dataset as in Figure 1 shows that elliptical NPs can take their endophoric antecedents anaphorically or cataphorically, specifically of which the latter may be affected by movement operations of Backward Anaphora Constraint (BAC). Some determiners or quantifiers, however, have no linguistic antecedent but refer to the situationally given exophoric antecedent depending on the context of utterance, as in (2).

- (2) I will tell you now... the damned bullets they go now toward my (=my heart/body/side).
(2006 MOV)

² BNC (British National Corpus) and COCA (Corpus of Contemporary American English)

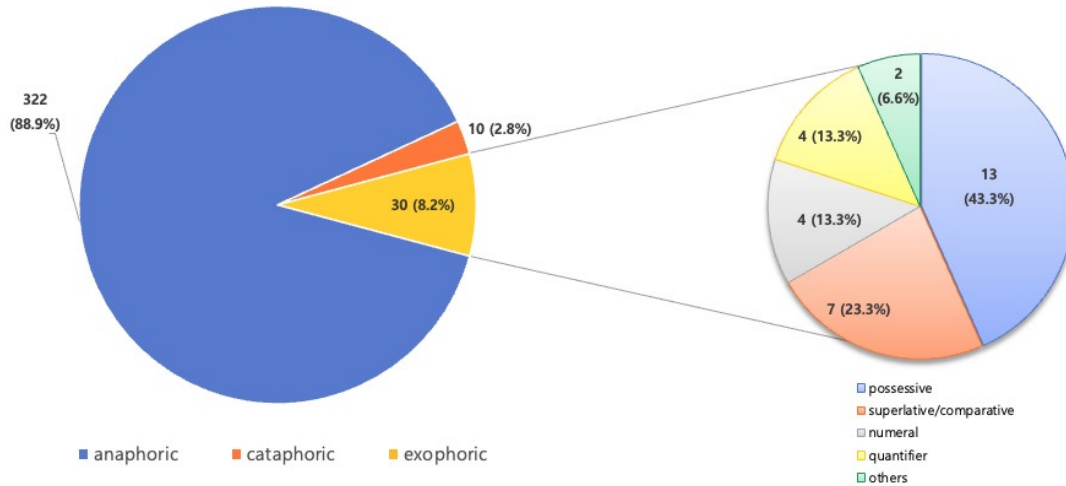


Figure 1: The distributions of endophoric and exophoric antecedents of N'-ellipsis

We also annotate the syntactic and semantic variables considering connectivity and locality constraints as well as syntactic mismatches in corpus attestation:

- (3) [Clause Obama didn't make arguments] about ending the war that differed substantially from [NP Clinton's]. (=Clinton's arguments). (2012 BLOG) [Category mismatch]

In (3), the only possible source of the remnant is the clausal form, which can be construed as 'Clinton's arguments'. We take this to indicate that the lack of head nouns may be derived from contextual information, not from nominal sources.

Another potential issue from the ellipsis concerns Antecedent-Contained Deletion (ACD) where the remnant involves a complex NP island:

- (4) a. They detail a bunch of [NP Romney's positions on surveillance, detention, and drone strikes [CP that just so happen to match Obama's]]. (2012 BLOG) a'. [NP Romney's positions on surveillance, detention, and drone strikes [CP that just so happen to match [NP Obama's <positions on surveillance, detention, and drone strikes [CP that just so happen to match ...]>]]]

In (4a), when an ellipsis site is contained within its antecedent, a structural problem arises from repeated NP within the ellipsis site, as represented in (4a'). In this regard, the source of head noun ellipsis calls into question the structural restrictions.

Our corpus-based investigation favors a discourse-based analysis of N-bar ellipsis in which the remnant without head noun is base-generated and its semantic resolution refers to the evoked discourse referent that includes a salient utterance with two types of antecedents: inherently

anaphoric (or deictic) or contextually anaphoric. Our theoretical and empirical researches, couched upon a construction grammar approach, seem to be a more robust direction than an ellipsis analysis.

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Interspeaker variability in the acoustic correlates of lexical stress in Arabic

Niamh Kelly

Newcastle University, UK

Cross-linguistically, common correlates of lexical stress include longer duration, higher intensity, higher f_0 and more peripheral vowel quality (Gay 1978, Sluiter & van Heuven 1996, Gordon & Roettger 2017). It has been found that languages use different correlates, for example, Spanish has been found to use duration and intensity (Ortega-Llebaria & Prieto 2009), and English does not use f_0 as a cue to lexical stress if the word is not focused, mainly using duration and vowel quality (Beckman & Edwards 1994, Sluiter & van Heuven 1996). In Jordanian Arabic, phonetic work on lexical stress has found that duration and vowel quality are used (de Jong & Zawaydeh 1999).

While such patterns have been found across languages or dialects, less work has examined how uniform speakers of a particular variety are in terms of these correlates. Research that has examined this question has shown some amount of variability among speakers, in stops (Allen et al. 2003), fricatives (Newman et al. 2001), and intonation (Xie et al. 2021).

The current study examines the acoustic correlates of lexical stress among 14 speakers of Palestinian Arabic. In Levantine Arabic, to which Palestinian belongs, stress falls on a wordfinal superheavy syllable, and in the absence of that, it falls on a heavy penult, and finally, on the antepenult (McCarthy 1979, Abdul-Karim 1980, Chahal 2001, Watson 2011). Palestinian Arabic has been described as having the following cues to lexical stress: higher intensity, higher mean f_0 , longer duration, and lower F1 and lower F2 for /a/ (Kelly 2023).

The target words were 13 disyllabic or trisyllabic words with penultimate stress, all with the short vowel /a/. The words were produced in frame sentences, in sentence-medial position (see Hall 2017 for details of stimuli and procedure). The correlates examined in this study are: mean intensity (dB), mean f_0 (semitones) and duration (msec) of the stressed and unstressed short vowels, excluding those in word-final position. 1286 tokens were examined.

For each acoustic measure, a model was built with Stress (stressed or unstressed) as the fixed factor. Then each model had a random slope for Speaker added, and this new model was compared with the original model for that same acoustic measure. If the model with the random slope for Speaker was significantly better than that without it, this would be evidence for speaker variability (Allen et al. 2003, Clayards 2018).

For each of the three acoustic measures, the model with a random slope for Speaker was significantly better than one without ($p < 0.0001$). Similar to previous work, the summaries for each model indicate that stressed vowels had higher intensity, higher mean f_0 and longer duration than unstressed vowels (see table).

Examining the figures, all speakers seem to have the same pattern for f_0 ; however, there is more variability in intensity and duration. These results suggest that speakers are using somewhat

different cues to realise lexical stress. These patterns will be discussed in more detail. Future research will also examine how the different speakers weight the cues associated with stress.

Word count: 499

	Coef.	SE	t-value	p-value
<i>Intensity:</i>				
Intercept	77.3	1.5	52.9	<0.001
Stress.Unstr	-1.8	0.3	-6.2	<0.001
<i>F0:</i>				
Intercept	89.4	1.1	82.8	<0.001
Stress.Unstr	-1.6	0.2	-7.6	<0.001
<i>Duration:</i>				
Intercept	61.1	5.3	11.5	0.014
Stress.Unstr	-11.1	2.9	-3.8	<0.01

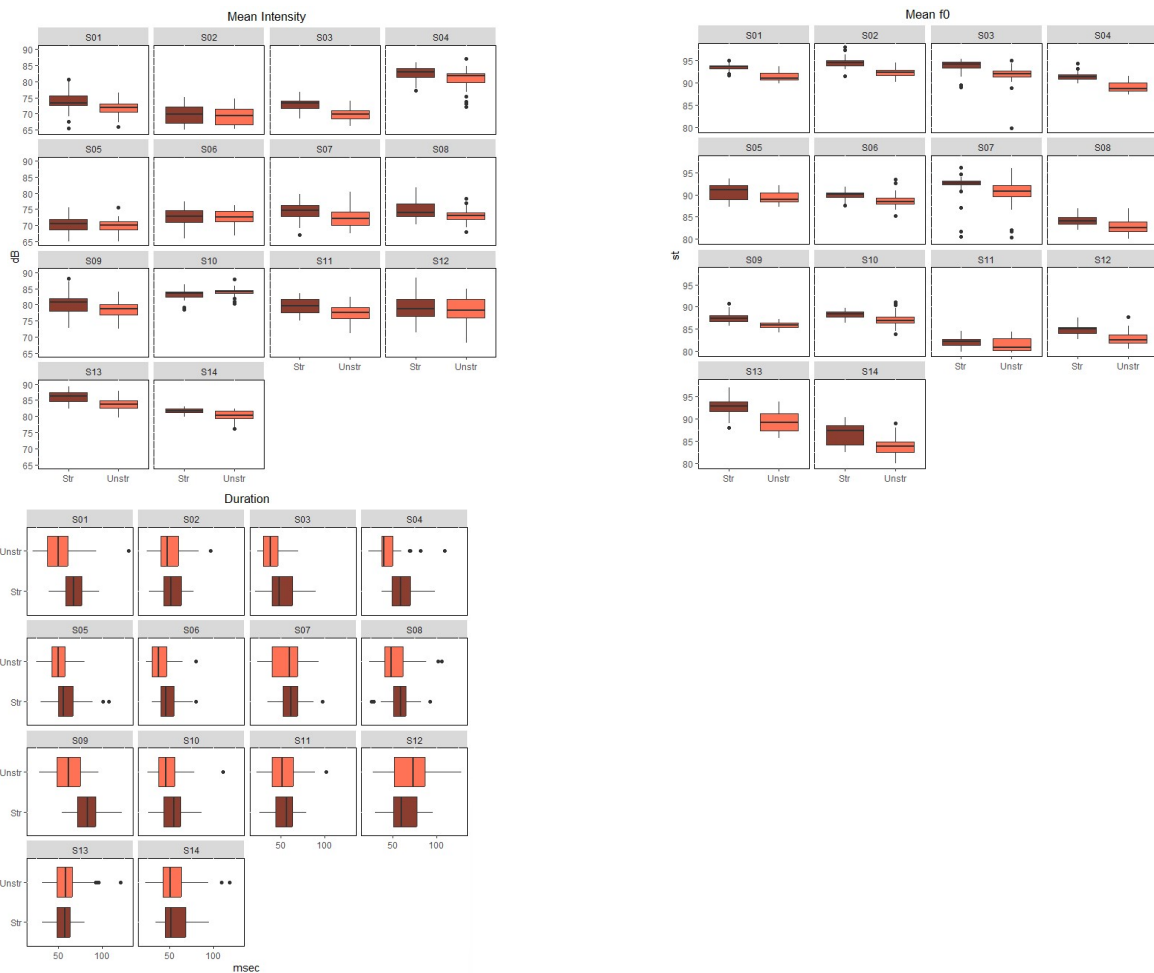


Figure 1: Mean intensity, mean f0 and mean duration for stressed and unstressed /a/ by speaker (speakers 1-7 are female, 8-14 are male; darker red shows stressed vowels)

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Irish initial consonant mutation: disentangling phonology from morphosyntax

Anna Laoide-Kemp
University of Edinburgh

The Celtic initial consonant mutations (ICM) involve a complex interaction of phonology, morphology and syntax, and have long posed a challenge to modular theories of language structure. I offer a strictly modular analysis of ICM in Irish, showing that the phonological and morphosyntactic aspects are driven by distinct mechanisms. The mutations are triggered by floating phonological material that is introduced into the derivation either directly from the lexicon (as part of the representation of a “trigger word”) or as the exponent of certain morphosyntactic features on the target word. This floating phonological material latches onto the initial consonant of a following word in order to produce a mutated consonant. Under my analysis, the interaction of phonology and morphosyntax does not require violating modular assumptions. Therefore, despite apparent evidence to the contrary, the mutations are compatible with a strictly modular system of grammar.

In Irish, ICM refers to a system under which a word-initial consonant can change, depending primarily on the morphosyntactic context: *br’og* ‘shoe’, *an bhr’og* ‘the shoe’ (triggered by the definite article on feminine singular nouns), *ar an mbr’og* ‘on the shoe’ (definite complement of the preposition *ar*). Previous theoretical approaches to ICM have generally emphasised either the phonology of the alternations (‘O Dochartaigh, 1979; N’í Chios’ain, 1991; Swingle, 1993; Gnanadesikan, 1997) or the mutation triggering process (Duffield, 1995; Stewart, 2004; Green, 2006; Hannahs, 2013). However, there has been relatively little research before now into how the grammatical modules of phonology and morphosyntax work together to effect the mutations (Pyatt (1997) and Breit (2019) being two exceptions). The question of how the work is split between grammatical modules is crucial however, because it provides us with a direct test of the strict modularity hypothesis: that is, the view that grammatical modules such as phonology, morphology and syntax operate distinctly and independently from one another (cf. Fodor (1983)).

In this talk, I concentrate on two cases where the morphosyntactic conditioning of ICM apparently interacts with the phonology:

1. The triggering of ICM by plural nouns that end in a palatalised consonant
2. The blocking of ICM when two coronal consonants come together at a word or morpheme boundary in some morphosyntactic triggering environments

I demonstrate that despite appearances, the phonology can be separated from the triggering mechanism in each of these contexts. Case 1 is shown to be better analysed as the triggering of mutation by nouns belonging to a specific plural class, for which independent evidence is provided. For Case 2, I use evidence from epenthesis to argue that mutation is triggered as expected in these environments, but that a separate phonological process intervenes to block the realisation of mutation when two coronals are adjacent. Furthermore, I offer an explanation for why such coronal blocking effects are only observed in a subset of mutation environments (namely, those for which the mutation-inducing element is part of the phono-

logical representation of a “trigger word”). I conclude that these two seemingly problematic cases are in fact compatible with strict modularity.

Word count: 474

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The learning and teaching of English in a multilingual context: from theory to practice

Bouchra Lif

University Hassan II of Casablanca

In this paper I am going to analyze the syntactic acquisition in a multi-lingual setting. I study how learners natives of Moroccan Arabic (MA) and speakers of Standard Arabic (SA) and French (Fr), acquire definiteness in English as a foreign language.

Current literature show that transfer has been among the factors that play a role in the acquisition of English. Some studies that have investigated the factor of transfer which is a complex phenomenon in acquiring English claim that the psychotypology could play a crucial role in cross-linguistic transfer (Hammarberg and Hammarberg 2005). Accordingly, there are three levels of transfer in language acquisition. Transfer from L1, transfer from L2 and combined transfer. A number of experts claim that transfer from L1 facilitates the process of acquisition (Rivers 1979). Whilst some scholars affirm that L1 influence is more noticeable on L3 acquisition, others claim that high L2 proficiency might reduce L1 influence in favour of L2 influence (Gut 2010). However, research has spotted numerous sources of transfer for L3 in which prior knowledge of multiple languages that are typologically similar may influence the acquisition of the third one in a process known as combined transfer (Da Angelis 2007). In short, these studies have concluded that transfer is not necessarily one source but can emanate from multiple source languages.

In this study. I will examine these claims against new set of data of Language acquisition by learners from a multi-lingual background speaking MA. SA and Fr. I investigate not only the use of determiners in plural nouns, but also genericity in the interlanguage data. Observation of learners' production shows some digression in the definiteness as shown in this chart:

Definiteness
Learner's production The technology has changed our life for the best The dogs are loyal animals
Target production Technology has changed our life for the best Dogs are loyal animals

Data consists of the use of generic plurals in sentences collected and I will discuss whether the source of transfer is related to the multilingual background of the learners; in other words, I will show if and when participants of the study transfer from MA, SA, Fr or all combined. I will discuss the implications of the findings in the teaching methods of English inside the classroom. Finally, I will suggest strategies to improve the teaching techniques of English so as to reduce the effect of transfer from their background languages.

The lenition of taps in Brazilian Portuguese

Wellington Mendes¹, Nívia Oliveira², & Thaís Cristófaró Silva¹

¹Federal Center for Technological Education of Minas Gerais, ²Instituto Federal de Brasília - IFB

Consonantal lenition and eventual segmental loss is an important issue in the evolution of languages as phonological processes may trigger the deletion of sounds in specific contexts [3]. A question that arises is whether the deletion of a segment has an impact in adjacent segments, as a consequence of the gradual implementation of sound changes [1]. This question will be considered in two environments where the lenition of taps in Brazilian Portuguese (BP) occurs: tautosyllabic consonantal clusters and intervocalically. These are emergent ongoing sound changes in BP where the rate of consonantal clusters reduction is 36% and the loss of intervocalic taps is 25% [5,7].

Obstruents and taps form a cluster in BP which may appear in stressed position, pre-tonically or pos-tonically. Consonantal clusters may undergo lenition so that a CV syllable occurs: *prato*>*pato* ‘plate’. This phenomenon has been reported in several regions of Brazil, being attested amongst adults and children [6,7]. It has been experimentally examined amongst adults and children to assess the impact of the segmental loss [2]. Results showed that words have greater duration when the tap occurs than when the tap is not manifested. Results also showed that vowel duration is longer in complex onsets which are manifested as a single onset than the duration of vowels in complex onsets which present the tap.

Intervocalic taps also undergo lenition where sequences of vowels appear: *agora*>*agoa* ‘now’. The phenomenon has been reported in several regions of Brazil amongst adults with the aim of investigating the outcome adjacent vowels: falling diphthong (*américa*>*améica*); hiatus (*flora*> *floa*); three adjacent vowels (*brasileira*> *brasileia*) or identical vowels (*preparada*> *prepaada*). It was experimentally examined to assess the impact of the segmental loss of the tap. Whereas no impact on adjacent vowels was observed, it was shown that the duration of words is longer when the tap occurs than when the tap is not manifested [5].

In general, results show that segmental loss may be associated to temporal loss. However, the phonetic implementation of segmental loss may differ in different environments. In complex onsets it was observed a greater duration of the vowel when the tap did not occur. On the other hand, in intervocalic position no impact on adjacent segments was attested. This supports the view that the implementation of ongoing sound changes may develop in distinct ways where fine phonetic detail plays an important role [4, 8].

402 words

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Keywords:

deletion
lenition
phonetic detail
tap
Brazilian Portuguese

Labeling and A'-Dependency under the Box Theory

Manabu Mizuguchi
Kokugakuin University

Issue: Chomsky (2023) proposes that in A'-dependency like (1), *what* moves only up to the lowest/first phase edge, where it is “boxed” and becomes syntactically inaccessible; for CI-interpretation (and SM-externalization), the matrix C accesses the box in the phase edge.

(1) What did John buy?

In this paper, I argue that given the labeling theory, the phase edge is not created upon IM (Internal Merge) of an element; unlike Chomsky (2023), for an element to be accessed by the phase head, IM must be successive cyclic.

Proposal: Labeling says that the phrase-phrase structure ($\{\{XP\}, \{YP\}\}$) can be labeled either when $\{XP\}$ or $\{YP\}$ moves out, or when X and Y agree in their shared feature (Chomsky, 2013, 2015). Given this, when *what* moves to Spec-*v* in (2), Spec-*v* will not be a phase edge since (2) is unlabeled (marked with “?”).

(2) {? what {_{vP} *v* {V, <what>}}}

Suppose that the phase edge is a position immediately contained in *vP*/CP phases. In (2), *what* is not contained in *vP* and is not boxed, accessible to further syntactic operations. When CP phase is structured, *what* moves out, which creates (3); otherwise, an unlabeled object remains.

(3) {<Q, Q> what {_{CP} C {... {_{vP} <what>₂ {_{vP} *v* {V, <what>₁}}}}}}

Notice that *what* is not in the phase edge in (3), either, because (3) is labeled <Q, Q> through agreement in Q: the label <Q, Q> is distinct from the label CP. However, in (3), <*what*>₂ is in the phase edge and is boxed: (2) is now labeled *vP* since a copy (<*what*>₂) is invisible (Chomsky, 2013). <*what*>₂ can be accessed by C for CI-interpretation thanks to movement to Spec-C.

Movement to the Target Position: The proposal in this paper argues that IM is not only successive cyclic but is also to the target position, the position where labeling succeeds thanks to agreement. This proposal is empirically supported by (i) Irish *wh*-movement and (ii) island/subjacency violations. As for (i), as shown in (4), C is realized as *aL* in *wh*-movement.

(4) Caidé **aL** shíleann Seán {**aL** iarrann sé ar Nollaig}?
what C thinks John C asks he on Noel
‘What does John think he asks Noel for?’

Chung and McCloskey (1987) argue that Spec-C is responsible for *aL* while *goN* appears when Spec-C is missing.

(5) a. {Spec {C {...}} (C→*aL*)

b. {C {...}} (C→goN)

Under Chomsky (2023), *caidé* moves only up to the lowest/first edge (Spec-*v*), where it is boxed and accessed by the matrix C, which predicts *goN* in (4) in the absence of Spec-C.

As for (ii), *wh*-movement occurs only within islands because it halts in the lowest/first edge.

(6) {ISLAND ... {Phase Edge X {PH {... <X> ...}}}}

Then island/subjacency violations like (7) would not be predicted.

- (7) a. *What is Bill spreading the news that John will buy?
b. *Who did Mary cry after Peter hit?

These phenomena show that IM is to the target position, supporting the claim that it is operated even under the box theory.

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How the plural is used in Andalusian Spanish: an acoustic analysis of the cities of Malaga and Granada

Belén Reyes Morente
Universidad de Málaga

The aim of this paper is to present the results of the phonetic-acoustic analysis of the behavior of vowels in different stratified groups according to sex, age and educational level in the cities of Málaga and Granada. The different behavior of vowels in the two dialectal areas is one of the features that clearly delimits both zones of Andalusia: eastern and western (Alvar, 1959, Volume VI).

Research on the subject is based on auditory descriptions (Hernández-Campoy and Trudgill, 2002), but published acoustic studies are scarce and have focused on the eastern area (Alonso, Zamora Vicente and Canellada de Zamora, 1950; Martínez Melgar, 1994; Herrera and Galeote, 2003; Herrero de Haro, 2016). However, there is no description of the functioning of Western vowelism.

The main research question of this proposal is to find out whether the loss of /-s/, which is practically categorical in word-final position (Vida-Castro, 2004; Tejada Giráldez, 2015), leaves any kind of mark on the preceding vowel. Since morphologically Spanish marks the plural with /s/ (Mondéjar, 2001), and this is lost as shown in the studies mentioned above, the objective is to identify which acoustic parameters are those that allow us to identify that something is plural without the prototypical marking being present.

To answer the research question, this paper compares the acoustic characteristics of the final vowels of two sets of words: the singular in the vowels /e, a, o/, and the plural /es, as, os/, but the final /-s/ of plural realized with a weakened or elided pronunciation. The data come from a group of women stratified according to age and educational level from the PRESEEA-Málaga (Vida-Castro, in preparation) and PRESEEA-Granada (Waluch de la Torre & Moya Corral, 2012) corpora.

The first results seem to indicate that the weakening and loss of /-s/ in syllable-final position does leave some acoustic clues in the preceding vowel, since significant differences are observed between the characteristics of the latter and those of vowels that are not followed by underlying /-s/. The main differences are found both in the height of the formants (F1, F2) and in the duration of the vowels.

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Word order variation in adult-directed and child-directed Dutch

Aleksei Nazarov
Utrecht University

Dutch has underlying verb-final word order (Koster 1975). Learnability-wise, it is interesting to see how well this can be gauged from language input, as surface order is often different. PPs and separable verb particles (SVPs) can optionally appear to the right of a verb, (1), taking away from the potential tokens where verbs are at the absolute right edge of their phrases (opaque order). PPs and SVPs can also appear to the left, maximizing the evidence for verb-finality (transparent order). (Verb raising, as in (1b), where a subordinate verb (*lopen*) appears to the right of a superordinate verb (*kon*) is required in such clauses.)

- | | |
|--|---|
| <p style="text-align: center;">TRANSPARENT (maximally final verb)</p> <p>(1) a. PP: ... dat zij [[in Utrecht] doceerde].
 that she in Utrecht taught
 ‘that she taught in Utrecht’</p> <p>b. SVP: ... dat zij [[door]-t_i kon] lopen_i.
 that she SVP could walk
 ‘that she could keep walking.’</p> | <p style="text-align: center;">OPAQUE (non-final verb)</p> <p>... dat zij [doceerde [in Utrecht]].
 that she taught in Utrecht</p> <p>... dat zij [t_i kon] [door]-lopen_i.
 that she could SVP- walk</p> |
|--|---|

The frequency of these orders in written and spoken adult-directed (AD), child-directed (CD), and childproduced (CP) texts is gauged using GrETEL 4 (Odijk et al. 2018), which searches treebanks in Alpino (Bouma et al. 2001) format. Corpora previously uploaded to GrETEL 4 are used, in addition to Dutchspoken subcorpora of CHILDES (MacWhinney 2000) that contain multi-word adult-child interactions. Generally, transparent word order is preferred for PPs and dispreferred for SVPs. However, transparent order rates depend on the modality of the corpus and whether it is aimed at adults or children. Table 1 indicates how often transparent word orders occur among PP/SVP-containing sentences. There is a continuum from written adult-directed to spoken child-directed/child-produced texts where the former have the weakest preference for transparent orders and the latter have the strongest such preference.

Table 1.	Written		Spoken		
	AD	CD	AD	CD	CP
% transparent, PP	51%	74%	71%	77%	80%
total PP sentences	16,928	3,362	12,758	4,075	1,368
% transparent, SVP	12%	26%	30%	51%	48%
total SVP sentences	695	115	755	78	27

As to PP function: location/direction more strongly prefers transparent order than the other two functions (Table 2). However, the modification and predicate complement functions still show a continuum from less transparent order in written adult-directed texts to more in spoken child-directed/produced texts.

Table 2.

	Written		Spoken		
	AD	CD	AD	CD	CP
% transparent, location/direction	79%	92%	88%	88%	86%
% transparent, modification	50%	65%	64%	63%	70%
% transparent, predicate complement	37%	70%	60%	75%	77%

Summarizing, transparent order is preferred across the board for PPs, yielding fewer exceptions to verb-finality. While it is not always preferred for SVPs, there are few attested SVP tokens, making it an insignificant source of exceptions, especially in child-directed language, which has more transparent orders and fewer occurrences of SVPs overall (Table 1). Thus, Dutch child-directed speech appears to have a maximum of cues in favor of verb-finality, and child productions mirror this.

(499 words excluding references)

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Function and Configuration of Nominalized Verbal Structures in Philippine Northern Luzon Languages

Benito Vargas Nolasco, Jr.

University of the Philippines Diliman, Quezon City, Philippines

Nominalization is a metonymy-based approach of grammatical derivation that generates structures with referential function. In both Eastern and Western grammatical traditions, works on nominalization have generally overlooked grammatical or clausal nominalization in favor of lexical nominalization. The current study concentrates on the function and information structure of nominalized verbal clauses or structures. Specifically, it aims to illustrate the morphosyntactic configuration of nominalized verbal clauses or structures of Northern Luzon subgroup of Philippine languages including Ibaloi (Nuclear Southern Cordilleran), Ibanag (Cagayan Valley), Eastern Bontok (Nuclear Cordilleran), Kankanaey (Nuclear Cordilleran), and Amganad/Central Ifugao (Nuclear Cordilleran). Archival materials and conversation tokens from fieldwork recordings reveal that the referential and case markers *i* (Ibaloi and Ibanag), *sota* (Ibaloi), *hen* (Eastern Bontok), *din* (Kankanaey), and *nan* (Amganad/Central Ifugao) indicate the absolutive marking of verbal clauses or structures. Nominalized structures introduced by these markers function as O or patient argument. The use of these referential markers is consistent with the argument that nominalized structures may attract determiners or case markers (Lehmann, 1988). Aside from the markers of nominalized verbal clauses and structures, this study also highlights the types of verbs that take nominalized verbal clauses as arguments including cognition/thinking, activity, utterance, modality, and liking verbs. The syntactic and semantic configurations of these verbs satisfy the criteria discussed by Dixon and Aikhenvald (2006). Furthermore, this study illustrates the information structure of nominalized verbal clauses. They may contain either transitive or intransitive-forming affixes. These affixes may encode information such as mood (i.e., realis-irrealis distinction). These structures may take ergative and/or oblique-marked noun phrases or pronominal clitics. They may also undergo other morphological processes, such as reduplication.

Keywords: Northern Luzon, Philippine indigenous languages, clausal nominalization, typology

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Length-sensitive allomorphy in Japanese compound nouns

Maelys Salingre

Mejiro University

Many morphophonological processes in Japanese compounds are argued to be sensitive to the prosodic length of their elements. One of the most famous examples is *rendaku*, or sequential voicing. Rosen [1] found that voicing of the initial obstruent of the second element (E2) is more frequent when at least one of the elements is two-foot long (Rosen's Rule). However, several production experiments with nonce words were unable to replicate Rosen's Rule on novel compounds [2,3]. On the other hand, a gradient length effect of the first element (E1) was found in [4].

This paper will present two types of allomorphy that show a sensitivity to length similar to that of *rendaku*'s: apophony of E1 (1a) and *ame/same* 'rain' as E2 (1b).

- (1) a. *ki* 'tree' + *kage* 'shadow' = *ko-kage* 'shade of trees'
- b. *ko* 'small' + *ame* 'rain' = *ko-same* 'drizzle'

In both types, the free allomorph may also appear instead of the bound allomorph:

- (2) a. *ki* 'tree' + *hako* 'box' = *ki-bako* 'wooden box'
- b. *niwaka* 'sudden' + *ame* 'rain' = *niwaka-ame* 'rain shower'

Recent studies on existing apophonic compounds have reported that apophony is sensitive to the length of both elements: apophony is more frequent when E1 is long and E2 is short [5,6]. However, the type of length effect is still debated. According to [5], there is a categorical difference between monomoraic and polymoraic elements. Contrastively, [6] observes a gradient length effect where apophony decreases gradually with length. [6] also found in a survey of 48 compounds noted as entries in Japanese dictionaries that the same bound allomorph is more frequent when E1 is short.

In this study, two forced-choice experiments were conducted to verify the length-sensitivity of apophony and *ame/same* in novel compounds. The first study on apophonic compounds involved 32 native speakers of Kanto Japanese while the second one on *ame/same* compounds involved 25 native speakers of Kanto Japanese. Participants were presented with novel compounds made up of existing words and were asked to choose between two readings: one with the free allomorph and one with the bound allomorph. The length of E2 for apophonic compounds and the length of E1 for *ame/same* compounds was controlled. The two research questions were as follows: Q1. Are apophonic compounds and *ame/same* compounds sensitive to the length of the other element? Q2. If they are sensitive to the length of the elements, is the length effect categorical or gradient?

The results showed that in both experiments, the bound allomorph was chosen significantly more when the other element was short (1 foot) than when it was long (2 feet). Although a slight decrease in bound allomorphs was observed between 1 and 2 moras and between 3 and 4 moras, no significant gradual length effect was found. This seems to indicate that a rule similar to Rosen's Rule is at play with apophonic and *ame/same* compounds.

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Acoustic characteristics of speech error repairs

Chelsea Sanker
Stanford University

How do competition and planning at the lexical and phonological level impact phonetic characteristics of words? Some work suggests that inhibition of lexical competitors results in words being less like those competitors; the acoustic correlates of phonological contrasts are larger in words with a minimal pair for that contrast, e.g. the VOT for the initial stop is longer in *pie* (cf. *buy*) than in *pipe* (Baese-Berk & Goldrick 2009, Wedel et al 2018), though it is possible that these differences could be caused by other phonotactic or lexical characteristics that correlate with the existence of minimal pairs.

To control for pre-existing patterns in the lexicon, another informative line of evidence is how the same word behaves in different contexts. Some differences between minimal pairs are increased when a speaker clarifies misheard words for a listener (Schertz 2013). However, deliberate listener-driven effects might differ from speaker-internal effects, and some of the observed patterns might be explained by overall increased prominence rather than hyperarticulation specifically in the relevant contrastive characteristics. Repairs of speech errors can help distinguish between potential explanations; Cutler (1983) finds that repairs of speech errors are prosodically marked, but doesn't quantify the component phonetic characteristics of that marking. She also proposes that this marking occurs more with lexical errors than phonetic errors.

This study examines the acoustic characteristics of error repairs within natural speech: Repairs have higher F0 and higher intensity than fluent speech, with mixed evidence for duration effects. Data comes from the Fisher corpus of American English telephone conversations: ~130 repairs of speech errors, all paired with instances of the same speaker producing the same or phonologically matched words in fluent contexts. Statistical results come from mixed effects models with speaker and phoneme as random effects.

There was no significant difference in VOT between fluent speech and repairs either overall or split by voiceless vs voiced stops. However, word-initial non-stop consonants were longer in repairs ($\beta = 17.0$, $p = 0.0182$).

There was no significant effect of fluent speech vs repairs on vowel duration. However, vowels in repairs had higher mean F0 ($\beta = 8.83$, $p = 0.018$) and higher intensity ($\beta = 1.7$, $p = 0.00121$). There was no evidence for these effects differing between lexical errors (e.g. *million* for *billion*) and phonetic errors (e.g. *noca(l)* for *local*).

The results provide evidence that repairs receive emphasis, marked by increased F0 and increased intensity. These prosodic effects do not seem to be driven by speakers increasing the phonetic differences between the target word and the error.

Duration might not be a characteristic of repair-marking emphasis. Given the context of a slowdown associated with a disfluency, duration might be a poor cue to for emphasizing the correct form. The observed lengthening of initial consonants in repairs might reflect the preceding disfluency not being resolved yet. This lengthening might only apply to segments without

crucially timed subparts. The lack of significant effect in vowels might be due to relatively few words beginning with vowels.

Word count: 494

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Analyzing within-gender variation in language

Michael A. Shepherd

California State University, Fresno

Traditionally, sociolinguists have studied only between-gender variation, i.e., the association of different gender categories (male, female) with language behavior. In Labov's words, "all analyses of gender differentiation begin by dividing the population into males and females, rather than a measure of socially defined degree of masculinity or femininity" (2001: 263). In this paper, we go against tradition and explore within-gender variation, seeking to correlate "degree of masculinity or femininity" with language behavior.

Studying within-gender variation requires a continuous measure of masculinity and femininity. Many such measures exist in social psychology, but most quantify endorsement of stereotypes rather than masculinity/femininity per se (Wood and Eagly 2015). We—a sociolinguist and a psychologist—developed and validated two parallel, 8-item scales (Authors 2018, in preparation) measuring Constantinople's (1973) three aspects of masculinity/femininity: sex-role identity, preference, and adoption. Men complete the RMS items (e.g., "Compared to the average man* of my generation, I consider myself...") using a 7-point Likert scale from "Much more masculine*" to "Much less masculine*."

*Women complete the RFS, which substitutes "woman" and "feminine," respectively.

Studying within-gender variation also requires a linguistic task where men and women differ. We selected the Map Task (Brown et al. 1984: 70-72), where men were predicted to talk more than women (James and Drakich 1993). Our participants were 132 native speakers of American English (66 men, 66 women), ages 18-51 ($M = 21.03$; $SD = 3.92$). Each completed the Task twice—once as Direction Giver, once as Follower, using different but comparable pairs of maps—yielding 132 dyadic conversations, which we subsequently transcribed. Each pair's Giver's Map featured starting and ending points, a route, and various landmarks. The corresponding Follower's Map featured only the starting point and (to promote dialogue) most but not all the same landmarks. The Giver's task was talking the Follower through marking the route onto the Follower's Map. The conversations—counterbalanced by gender—included 22 male–female dyads (i.e., with a male Direction Giver), 22 female–male, 44 male–male, and 44 female–female.

Participants invariably did more of the talking when acting as Direction Giver, averaging 70.7% of a conversation's word count (vs. 29.3% as Follower). The 44 mixed-gender conversations show the effect of categorical gender. The 22 male Givers averaged 73.4% of the words, and the 22 female Givers 68.7%, which is narrowly nonsignificant in a one-tailed analysis, $t(42)=1.48$, $p=.074$. However, if we use the difference between the interlocutors' RMS/RFS scores, rather than their categorical gender, to model how much each talked, the result is significant. The more masculine/less feminine a Giver was relative to the Follower, the more of the talking they did, $F(1,42)=6.20$, $p=.017$, $R^2=.13$. Likewise, in the 44 male–male and 44 female–female conversations—where a categorical gender analysis cannot tell us anything—the difference between the interlocutors' RMS and RFS scores, respectively, significantly predicts how much each talked, $F(1,42)=4.76$, $p=.035$, $R^2=.10$ and

$F(1,42)=5.09$, $p=.029$, $R^2=.11$, respectively. Ultimately, we hope these results inspire more research on within-gender variation.

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The 'weight-and-concomitant-length' theory of lexical geminates: model and applications*

Nina Topintzi

Aristotle University of Thessaloniki, Greece

The representation of lexical geminates remains controversial despite having received considerable attention in past work. According to one prominent account, geminates are underlyingly weightful (moraic) in contrast to weightless (non-moraic) singletons (e.g. Hayes 1989, Davis 1999, Topintzi 2010, among others), which may acquire weight in codas through Weight-by-Position (WbyP), but do not have to. Another major alternative views geminates as segmentally long, occupying two timing slots, unlike short singletons (e.g. Ringen & Vago 2011). Weight assignment in this instance results from WbyP, which impacts codas (geminate and singleton) equally.

It turns out that none of these approaches can fully capture the typology of intervocalic geminates (G) in relation to singletons (C), as outlined in (1).

(1) Weight for singleton (C) and geminate (G) codas

- | | | | |
|-------------|-------------|-------------|-----------------|
| I. | CVC = light | CVG = light | as in |
| Selkup | II. | CVC = heavy | CVG = heavy |
| as in Latin | | | |
| III. | CVC = light | CVG = heavy | as in Koya |
| IV. | CVC = heavy | CVG = light | as in Ngalakgan |

While the two approaches somewhat diverge in the patterns they correctly predict—(1.II-III) for the ‘weight’ approach vs. (1.I-II) for the ‘length’ approach—they converge in leaving (1.IV) unaccounted for. Under the ‘weight’ approach, the weightlessness of CVG is paradoxical; under the ‘length’ approach, the asymmetrical weight across CVC and CVG is unexpected, because codas ought to be consistently heavy or light.

To solve this problem, I present the ‘weight-and-concomitant length’ (WCL) theory of lexical geminates. In this model, lexical geminates bear an underlying mora, whose association to higher and lower structure produces different effects. Integration under a syllable node produces weight; association to a lower node, i.e. a consonant, relates to phonetic length. Effectively, a consonant is interpreted as a geminate on the surface, due to its link to the underlying mora, which in turn, may end up prosodically integrated or unintegrated to a syllable, thus producing weightful and weightless geminates, respectively. Thus, rather than being seen as a quality that arises independently, the increased length of a lexical geminate is seen as a concomitant of underlying weight. Consonants that lack an underlying mora are interpreted as singletons. On the surface, these may acquire weight through WbyP. Importantly, such mora is an epenthetic one, a property visible to phonology, which can therefore always distinguish between singletons and geminates, as well as between underlying and derived-on-the-surface weight.

WCL is capable to capture the facts in (1) and successfully extends to a wider range of empirical data involving geminates. These include edge geminates, the co-occurrence of geminates in

different positions within the same language, and their co-occurrence with singletons with similar or different weight properties. WCL's implementation within OT employs standard constraints with minor modifications. The model is illustrated with the analysis of the Ngalakgan pattern in (1.IV) and Tedumuni Okinawan, a language with initial and intervocalic geminates.

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*partly based on joint work with Eva Zimmermann (Uni. Leipzig)

Why we can do without the phoneme: The inferential process of speech recognition

D.P. van Soeren

Rijksuniversiteit Groningen

This paper argues that the compositional view of a linguistic form consisting of phonological units does not do justice to the way these forms are identified by language users, which seems to be an *inferential*, not a *compositional* process. Importantly, we show how some linguistic data can only be explained from the inferential perspective.

When it comes to the storage of linguistic forms in the mind, Bybee (2001) argues that linguistic forms do not *consist* of phonemes. That is not to preclude the psychological reality of phonemes; according to Pierrehumbert (2002) commonalities that are roughly the size of phonemes may be extracted from linguistic forms, but are secondary to the way they are stored in the mind. Nevertheless, from a methodological perspective, Bybee (2001: 84-86) states that, if we take a *sequence* of articulatory events as the prime unit of phonological analysis, we do a better job at explaining processes that take place in continuous speech, and thus argues that linguistic forms should be studied as a whole.

We advance this argument by discussing the perspective of lexical identification. This paper discusses a number of case studies to show that speech sounds are best considered imperfect hints to the identification of a form (rather than compositional units), in an inferential process (see Grosjean 1980; Nootboom 1981) in which certain elements in the stretch of phonetics are more important to the inference of the form, and others seem to be more dispensable.

We support our hypothesis with original data that can only be explained from the inferential perspective: in Spanish (but also in other languages) we observe many labials at the beginnings of forms, but few at the end. This can be accounted for by the functional load of the beginnings and endings of forms: the beginning of a form is most crucial for its identification (Diver 1979/2012): in the example *'I would like to order a cup of co-*', the last word is probably *coffee*, indicating that phonetic material at the beginning of a form is likely to reduce enough candidates to allow its identification, and the end is more redundant.

The high functional load of the beginning of the form can account for the favouring of labial consonants in initial position (e.g. Davis 1984/1987; Tobin 1997; Van Soeren 2023). This is to do with a perceptual advantage of labial articulations: they have been demonstrated to be more visually salient (Magno Caldognetto & Zmarich 2000), which means that in face-to-face communication they are more easily identified than non-labials – they are better hints. This explains their favouring in initial position, which is more crucial for the identification of the form. In final position, the perceptual advantage of labials is less relevant because at the end, the form has probably already been inferred.

Word Count: 461

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Raising and Selection

Liumao Zhong

Stony Brook University

Some predicates in Mandarin Chinese exhibit possessum selection: body-part possessum is selected but social relations isn't (1a):

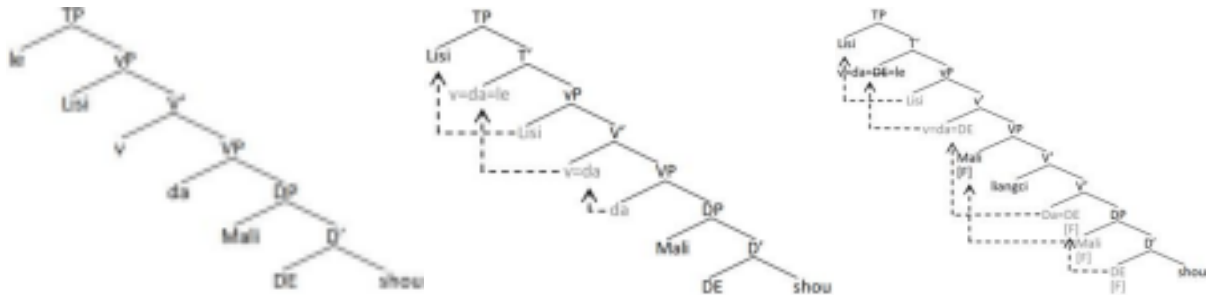
- (1) a. Lisi da le Mali *liangci* **shou**/***shushu**. b. Lisi da le liangci Mali de shou/shushu.
 Lisi beat ASP Mali twice hand/uncle Lisi beat ASP twice Mali DEhand/uncle
 "Lisi beat Mali twice in the hand/uncle." "Lisi beat twice Mali's hand/uncle."

This selection is found only in the external possession constructions (EPC) as in (1a), where the frequency adverb *liangci* "twice" indicates that *Mali* is external to *shou* "hand" or *shushu* "uncle", but not in its internal possession counterpart (1b).

Raising I argue that the possessum selection arises as a result of head movement. It is argued that (1a) involves a raising structure instead of control since in case of complex possessors, only the main possessor can externalize:

- (2) a. Lisi da le Mali de didi liangci shou/*shushu.
 Lisi beat ASP Mali DE brother twice hand/uncle
 b. *Lisi da le Mali liangci didi de shou/shushu.
 Lisi beat ASP Mali twice brother DE hand/uncle
 "Lisi beat Mali's brother's hand/uncle twice."

A control analysis would wrongly predict (2b) as possible by postulating a lowPRO. However, a raising structure, either in Chomsky (1981) style or Hornstein (1999) style, cannot capture the optionality of possessor externalization as these analyses are obligatorily case-driven. I propose that the possessum bias is a byproduct of a head movement called "**DE-raising**". (3a) is the underlying structure; (3a) derives (1b) and (3c) derives (1a). (3) a. b. c.



Selection Possessive heads are thematically unspecified. For example, *John's book* can be interpreted as the book that John bought, the book John wrote or any relation possible in the context. Thematically unspecified, the possessive relation cannot have full interpretation at LF; the possessive relation gets specified either by the context (as in *John's book*) or by the head it is combined with (as in *John's wife*, whose interpretation is determined by the possessum which according to Barker (1995) inherently bears a thematic relation). Verbs also bear thematic relation

and this rescue operation also works in the verbal domain as *John* gets an agent role in *John had his student leave the classroom*.

When *DE* moves to *da* 'beat', *DE* identifies with *da* 'beat'. Since agent roles are externally introduced (Kratzer 1996), *da* 'beat' is only capable of assigning a theme role. Identifying with *da* 'beat', *DE* assigns its syntactic argument *Mali* a semantic role in the event denoted by *da* 'beat', namely theme. Now, the possessor and the possessum are both theme of *da* "beat". This double theme structure is conceptually compatible with the body-part relations as beating *Mali's* hand entails beating *Mali*; however, this is not compatible with social relations -- beating *Mali's* uncle never entails that *Mali* is beaten, and thus possessum bias arises.

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Word Count: 472