Problematic Areas of Grammar in English-Arabic-English Translation: A Selective Contrastive Study

Abstract:

The fact that English and Arabic belong to two distinct language families - English is an Indo-European language, whereas Arabic is a Semitic language - makes the morphology, syntax and style of writing of the two languages vary significantly. As a result, translating between these two languages has always been a challenging task for novice translation students; even if they are native speakers of one of these two languages. This task is even more confusing to the students who translate between English and Arabic and they are not the native speakers of either of these languages; e.g. the students who learn Arabic in India.

The researcher worked as a teaching assistant, teaching English-Arabic-English translation to the B.A. students of the English Department at Al-Baath University, Syria from 2011 to 2014. She also attended several translation classes with the B.A. and M.A. students in the Center for Arabic and African Studies at Jawaharlal Nehru University and the Departments of Arabic at the University of Delhi and Jamia Millia Islamia in India in the years 2015, 2016 and 2018. By engaging in such academic activities, the researcher has gathered a comprehensive idea of the most recurrent problematic areas that confront the Arab students and the non-native students in India while translating between English and Arabic. This has intrigued the motivation for this study.

This is an analytic descriptive study which aims to provide a contrastive analysis of some of the basic components of the grammars of English and Arabic. To this end, the researcher provides a general definition of each grammatical component under study, followed by an analysis of its types and rules in English as well as in Arabic to reveal the similarities and differences. Illustrative examples of each of these cases are also provided and discussed. Such analysis helps to determine and describe the areas that can be the reason/source of problems and thus errors while translating between English and Arabic. In fact, so many aspects of grammar can be a reason/source of problems while translating between these two languages, but the researcher tried to limit this study to the most noticeably recurrent ones; viz. translation of tenses, passive voice, grammatical agreement, grammatical case, reverse word order and Arabic nominal sentences. Although these grammatical components may seem to be simple and pose no difficulties for professional translators; especially if they are native speakers of Arabic or English. However, they can be truly and discouragingly problematic to the novice students of translation and particularly if they are non-native speakers of English and Arabic.

The study concludes with some general and specific practical suggestions. We hope that these suggestions will help the novice English-Arabic-English translators generally and the non-native speakers of the two languages particularly overcome such problematic areas whenever they encounter any of them.

Word count: 463 words

Prosodized floating tone in triplications of three Taiwan Hakka dialects

Abstract. It has been suggested in several studies (Yip 1980, 1989, 2002; Ou 1996, 2000, among others) that there is an emphatic floating tone in Southern Min triplication. This floating tone comes from an emphatic -*a* suffix; its segment is usually absent in the triplication, but its HM tone stays and continues to serve as a floating emphatic morpheme. Hakka dialects in China do not usually have triplications like those in Southern Min, but in Taiwan the Hakka dialects are under the influences of Taiwanese, and have developed some similar triplicated forms, though not very popularly used. This paper addresses the triplications of three Hakka dialects spoken in Taiwan, Sixian, Hailu and Dongshi. Like Taiwanese, only the Ⓗ-element of the floating ⓗⓜ is adjoined to the leftmost syllable in Sixian and Hailu triplication, except that the latter appears to show a case of tonal metathesis. On the other hand, Dongshi allows the floating ⓗⓜ to split and be shared by the leftmost and the medial syllables. The floating tone adjunction creates a tone cluster in the leftmost syllable of the triplication. The following are some examples. In the duplications of (1a-c), the right syllables preserve their base tones, while the left syllables surface with their sandhi tones or base tones (if tone sandhi is nonapplicable).

	Duplications	Triplications	
(1)a.	*son son* 'a little sour' L MH	a'. *son son son* 'very sour' MH L MH	(Sixian)
b.	*vu vu* 'a little black' HM HM	b'. *vu vu vu* 'very loose' MH HM HM	(Hailu)
c.	*kong kong* 'a little light' M M	c'. *kong kong kong* 'very light' MH L M	(Dongshi)

In (1a'), the combination of L and the floating Ⓗ yields an MH cluster in the leftmost syllable of the triplication, as illustrated in (2a), where the register of L is raised. In (1b'), it looks like there is a tonal metathesis (HM→MH), but actually not. As illustrated in (2b), when the floating Ⓗ is adjoined to the leftmost syllable, neither an adjacent H sequence nor a concave cluster, like HMH, is permitted within a single syllable, and thus an MH cluster surfaces. The leftmost syllable of the triplication is the prosodic head (σ_{Δ}), which requires a high-register tone/tone cluster, while the medial syllable is the weakest prosodic nonhead ($\sigma_{-\Delta w}$), which in Dongshi requires a low-register tone. As in (1c'), illustrated by (2c), the floating Ⓗ is adjoined leftward, while the floating Ⓜ (the ⓛ melody of the high-register floating ⓗⓜ) replaces the tone of the medial syllable, which requires a low-register, and thus L is derived.

(2)a. (L Ⓗ~~Ⓜ~~)σ_{Δ} ⟶ (M H)σ_{Δ}

b. (HM Ⓗ~~Ⓜ~~)σ_{Δ} ⟶ (M H)σ_{Δ} (*H H * HM H)

c. (M Ⓗ)σ_{Δ} (Ⓜ ~~M~~)$\sigma_{-\Delta w}$ ⟶ (M H)σ_{Δ} (L)$\sigma_{-\Delta w}$

Theoretically, several constraints are proposed here. Align-R-Ⓗ requires the right edges of the floating Ⓗ and the leftmost syllable to coincide, and Align-E-ⓛ requires the floating ⓛ melody to replace the tone of the medial syllable; Δ/Hr ensures that the prosodic head has a high-register, while $-\Delta_w$/Lr ensures that the weakest prosodic nonhead has a low-register; Max-Ⓗ preserves the floating Ⓗ, while Max-ⓛ preserves the floating ⓛ melody; OCP-H_{σ} bans an adjacent H sequence in a single syllable, and *Concave$_{\sigma}$ bans any concave within a syllable. Sixian and Hailu display a constraint ranking: [Align-R-Ⓗ, Δ/Hr, OCP-H_{σ}, *Concave$_{\sigma}$, Max-Ⓗ >> Max-ⓛ, $-\Delta_w$/Lr]. Other details (such as tone sandhi) omitted, this constraint ranking renders two predictions: first, only the floating Ⓗ is adjoined to the leftmost syllable, which is the prosodic head and must be of high-register; second, the floating-ⓛ melody is deleted, without affecting the medial syllable. In Dongshi, Max-ⓛ and $-\Delta_w$/Lr are top-ranked so that the floating ⓛ melody replaces the tone of the medial syllable, which is the weakest prosodic nonhead and thus must be of low-register.

'*Relics*' of PLACE harmony in atypical phonological development in child Greek

Consonant harmony (CH), an assimilatory process between non-adjacent consonantal segments, crosslinguistically characterizes child speech in the early stages of *typical* phonological development and it fades in the later developmental stages (e.g. Grunwell, 1982, a.o.). CH also occurs in *atypical* phonological development (e.g. Bernhardt & Stemberger, 1998) and it is attributed to *a-synchronization* between the development of the prosodic word and that of the contrast among the consonants (Bat-El, 2009).

We investigate *instances* of CH in the atypical speech of 21 children with Greek as L1 (4;06-6 years, mean age: 5;08) diagnosed with Developmental Language Disorder. The cross-sectional data are drawn from Stavgiannoudaki (2010), Kalisperaki (2010) and Giannakaki (2020), who used a picture naming task for data collection. The children's grammar exhibits a protracted CH, as a *relic* of earlier developmental stages, still demanding, to some extent, no contrast in PLACE features. Therefore a partial harmony arises involving only the MAJOR PLACE OF ARTICULATION (PoA), thus neutralizing the PLACE contrast within a harmonizing domain, while the MANNER OF ARTICULATION (MoA) and the [±voice] features are realized faithfully in children's atypical realizations. CH occurs among non-adjacent *non-sonorant* consonants, in two distinct sets:

(i) among [-sonorants] with identical MoA: [αcontinuant…αcontinuant]), STOP-STOP, 3,17%, (1,2) and [βcontinuant…βcontinuant]) FRICATIVE-FRICATIVE, 19,27% (3-4),

(ii) among [-sonorants] with different MoA: [αcontinuant…βcontinuant]), 7,27%, STOP-FRICATIVE (in either order) (5-7).

The LIQUIDS (CORONALS) are transparent and they are skipped in CH (7), because they cannot physically realize another PoA in Greek. The formal analysis is couched in Optimality Theory (Prince & Smolensky, 1993/2004).

RESEARCH QUESTIONS: What are the conditions for harmonizing segments to emerge? What are the harmonizing domain(s)? What drives the CH and the directionality?

We argue that harmony preconditions *feature similarity* (e.g. Walker, 2000; Hansson, 2010) over the featurally defined natural classes in (i, ii). PLACE-harmony applies within harmonic *headed spans* (McCarthy, 2004), namely harmonic domains limited to two consonants, (Onset-Onset) in (1-7), that agree for some feature(s) as in (i, ii). The spans are constructed at the end or at the beginning of the word, according to the location of their *head*, namely of the segment which realizes the PoA of the corresponding input segment faithfully. CH is driven by featural CC-correspondence (Rose & Walker, 2004) limited to two proximal similar span segments, while PoA is determined by the PLACE-feature of the head. The CH directionality results from a constraint interaction of Markedness and Faithfulness constraints determining the left/right position of the head (McCarthy, 2004). We claim that the head parsing is dependent on the featural similarity in (i, ii), therefore it obeys different requirements:

- If the span segments have a *broader* similarity, namely two (or more) features, such as [-sonorant, α/β continuant] then the head parsing results from the interaction of Faithfulness (IDENT-IO[POA]) and Markedness (*LABIAL≫*DORSAL≫*CORONAL) constraints for PLACE.
- If the span segments have a *restricted* similarity to one feature only ([-sonorant]), then the segment with the higher *consonantal strength*, i.e. STOP, is parsed as head. Proposed strength scale for Greek (Kappa, 1995): PLOSIVES>FRICATIVES>s>z>NASALS>LIQUIDS(l>r).

(496 words)

DATA

(Note: The parentheses indicate the harmonic spans. The head of each span is underlined)

Target	→	Child's Output	Gloss	Child's #No / Name	(Source)
1) ˈto.kso		(ˈko.kso)	'bow'	#5	(STAV)
2) ˈper.go.la		(ˈper.bo).la	'arbor'	Mich.	(KAL)
3) ˈɣlo.sa		(ˈɣlo.ça)	'tongue'	#2	(GIAN)
4) ðel.ˈfi.ni		(ve.ˈfi).ni	'dolphin'	#9	(GIAN)
5) a.ˈkri.ða		a.(ˈkri.ja)	'grasshopper'	#1	(GIAN)
6)ˈðra.kos		(ˈja.kos)	'dragon'	#28	(GIAN)
7) psa.ˈli.ði		(psa.ˈli.vi)	'scissors'	#26	(GIAN)

References

Bat-El, Outi. 2009. Harmonic Domains and Synchronization in Typically and Atypically Developing Hebrew-Speaking Children. *Language Sciences* 31, 117-135.

Bernhardt, Barbara H., and Joseph P. Stemberger. 1998. *Handbook of phonological development from the perspective of constraint-based nonlinear phonology*. San Diego: Academic Press.

Giannakaki, Kalliopi. 2020. *Evaluation of perception and production of phological structures in spontaneous speech of children with typical and atypical development: The case of two-member consonant clusters* [in Greek]. M.A. Thesis, University of Crete.

Grunwell, Pamela. 1982. *Clinical Phonology*. London and Canberra: Croom Helm.

Hansson, Gunnar Ólafur. 2010. *Consonant Harmony Long-Distance Interaction in Phonology*. Berkeley and Los Angeles: University of California Press.

Kalisperaki, Foteini. 2010. *Consonant clusters in the speech of children with language disorders: Drama intervention* [in Greek]. M.A. Thesis, University of Crete.

Kappa, Ioanna. 1995. *Silbenphonologie im Deutschen und Neugriechischen*. Ph.D. Thesis, University of Salzburg.

McCarthy, John J. 2004. *Headed spans and autosegmental spreading*. Linguistics Department Faculty Publication Series. 42.
Retrieved from https://scholarworks.umass.edu/linguist_faculty_pubs/42

Prince, Alan, and Paul Smolensky. 2004. *Optimality theory: constraint interaction in generative grammar*. Oxford: Blackwell. [1993 original circulation as RuCCS Technical Report No. 2, Rutgers Center for Cognitive Science, Rutgers University.]

Rose, Sharon, and Rachel Walker. 2004. A Typology of Consonant Agreement as Correspondence. *Language* 80 (3), 475-531.

Stavgiannoudaki, Afroditi. 2010. *Realization of consonant clusters in the speech of children with language disorders* [in Greek]. M.A. Thesis, University of Crete.

Walker, Rachel. 2000. Long-distance consonantal identity effects. In *Proceedings of WCCFL 19*, ed. by Roger Billerey and Brook Lillehaugen, 532–545. Somerville, MA: Cascadilla Press.

Russian sonority reversals. Do they really exist?

Many linguists (Clements 1990, Zec 2007, Parker 2012, among others) explain the consonant sequences via the Sonority Sequencing Principle (SSP), which is considered to be universal (Clements 1990). However, Russian is thought to be less restrictive concerning the syllable phonotactics (Davidson and Roon 2008):

(1) Russian: /kto/ 'who', /rdet/ 'colour'

Many attempts have been made to account for these structures, including the appendix theory (Vaux and Wolfe 2009). According to Hall (2002: 34) extrasyllabic consonants occur "when they violate sonority sequencing…". Such consonants remain unsyllabified and belong to a higher prosodic level (Clements 1990, Vaux and Wolfe 2009, among others), suggesting that all the languages, including Russian, follow the SSP.

The current paper examining the phonotactics of biconsonantal and triconsonantal onsets, proposes that Russian does not exhibit sonority reversals in complex onsets. Triconsonantal clusters are always an appendix plus a complex onset (2c), and in the latter only sonority plateaus or rises are permitted, but not reversals. Reversals in biconsonantal clusters occur because the cluster consists of an appendix and a simple onset (2b):

(2) Russian word-initial structures

a. Biconsonantal onset	b. Appendix + onset	c. Triconsonantal clusters
(C_1C_2)	$(C_1)_A(C_2)_O$	$(C_1)_A(C_2C_3)_O$

The logical phonotactics of obstruents (O) and sonorants (S) into the biconsonantal and triconsonantal clusters are the following: OS, OO, SS, SO and OOO, SSS, OSS, SSO, OSO, SOS, SOO, OOS, respectively.

Table 1 provides an example for each sequence, if it occurs in the language; if it does not, the cell is blank:

Table 1: Word-initial consonant clusters

Type of a cluster	Example	Gloss
OS	/kniga/	'book'
OO	/ptitsa/	'bird'
SS	/mnit'/	'to suspect'
SO	/rdet'/	'to blush'
OOO	/kstati/	'by the way'
SSS		
OSS		
SSO		
OSO		
SOS	/mgnovenie/	'moment'
SOO	/mstit'/	'to revenge'
OOS	/vzroslij/	'adult'

There are no restrictions in the biconsonantal onsets, but there are some in the triconsonantal sequences. In the latter both O and S can be in C_1 and C_3, e.g., <u>O</u>OS, <u>S</u>OO and SO<u>S</u>, SO<u>O</u>; but only O can be in C_2, e.g., O<u>O</u>O, S<u>O</u>S. Assuming that C_1 is extrasyllabic, the C_2C_3 should make either the SSP-adhering onset, or the sonority plateau (OO, not SS). In SS and SO, C_1 is the appendix, and C_2 is a simple onset.

(3) Russian word-initial clusters:

a. Biconsonantal onset	b. Appendix + onset	c. Triconsonantal clusters
(C_1C_2)	$(C_1)_A(C_2)_O$	$(C_1)_A(C_2C_3)_O$
OS, OO	SO, SS	(S)(OS), (S)(OO), (O)(OS)

The absence of SSS and OSS is not explained by the proposed analysis. According to Kreitman (2008), SS onsets are the most marked onsets. While they occur in biconsonantal clusters, they are banned in connection with an appendix, which would result in an extraordinarily marked structure. We accordingly assume that the SS sequences are prosodified as appendix plus simplex onset and do not constitute a complex onset.

In conclusion, Russian phonotactics is rather restrictive and complex onsets adhere to the SSP by allowing only plateaus or rises.

Word count: 491, excluding references.

References:

Clements, G. N., 1990. "The role of the sonority cycle in core syllabification". In: *Papers in Laboratory Phonology I. Between the Grammar and Physics of Speech*, Cambridge: Cambridge University Press, 283-333.

Davidson L. and Roon, K., 2008. "Durational correlates for differentiating consonant sequences in Russian". In: *Journal of the International Phonetic Association,* Volume 51, number 1, Cambridge University Press*,* 137-165.

Hall, T. A., 2002. "Against extrasyllabic consonants in German and English". In: *Phonology,* Volume 19, number 1, Cambridge: Cambridge University Press, 33-75.

Kreitman, R., 2008. *The Phonetics and Phonology of Onset Clusters: the Case of Modern Hebrew*, PhD dissertation, Cornell University.

Parker, S., 2012. "Sonority distance vs. sonority dispersion – a typological survey". In: *The Sonority Controversy*, Boston/Berlin: De Gruyter Mouton, 101-165.

Shvedova, N. U., 2011. *Tolkovij Slovar' Russkogo Yazika.* Moskva: Azbukovnik.

Vaux, B. and Wolfe, A., 2009. "The Appendix". In: *Contemporary Views on Architecture and Representations in Phonology*. Cambridge, MA: MIT Press, 101-143.

Zec, D., 2007. "The Syllable". In: *The Cambridge Handbook of Phonology*, Cambridge: Cambridge University Press, 161-194.

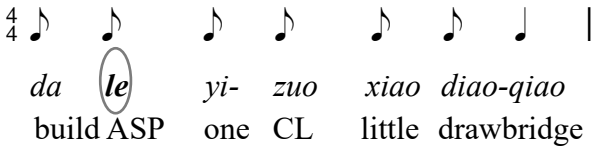
The Interaction of Music Accent and Mandarin Prosodic Structures

This paper addresses the interaction of music accent and different mandarin prosodic structures, and takes a perspective from the perception grammar. The language-to-music mapping is observed through melody composing in Mandarin children's songs, which values the rhythmic correspondence between language and music in order to facilitate Mandarin learning of children.

I collect 39 Mandarin children's songs. The lyrics are written first and the melody composers interpretate the linguistic rhythm of the lyrics and map this linguistic output to music through perception grammar. The interaction of music accent and Mandarin prosodic structures, syllable, foot and intonational phrase (IP) are presented below.

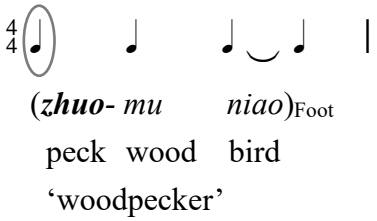
First, the Mandarin neutral-toned syllables are unstressed syllables, which are mapped to unaccented music beats. As shown in (1), *le* is a neutral-toned syllable, which is mapped to an upbeat that is unaccented.

(1) The mapping between neutral-toned syllable and unaccented music beat



Second, the strongest beat in a measure is mapped to the Mandarin foot initial syllable. As shown in (2), the first beat is the strongest beat in each measure, which is mapped to the foot initial *zhuo*.

(2) The mapping between the strongest beat and the foot initial syllable



Third, the fact that Mandarin IP final syllables tend to have longer musical duration influences the assignment of music beats. As shown in (3), the IP final syllable, *zi*, is mapped to two beats, which are longer than their preceding beat, a half beat. However, in order to make *zi* longer, this neutral-toned *zi* is forced to show earlier and is mapped to the third beat, which is a stronger beat in spite of the fact that this would violate the first observation.

(3) IP final lengthening and music beat assignment

((*wo* *shi*)$_{\text{Foot}}$ (*xiao* *tu-* ***zi***)$_{\text{Foot}}$)$_{\textbf{IP}}$
1SG be little rabbit
'I am a bunny.'

This paper offers an optimality theory (Prince and Smolensky 2004) analysis of the language-to-music mapping. Several constraints are posited, including the sequential markedness constraint, $*\sigma_{n-1} \geq \sigma_n]_{IP}$ that requires IP final syllable to have longer musical duration, ALIGN-L(Primary accent, Ft), which requires the strongest beat in a measure to be aligned with the foot initial syllable, etc. In brief, this cross-disciplinary study illustrates the interaction of music accent and different Mandarin prosodic structures from the perspective of perception grammar. We can also better understand the melody composing of Mandarin children's songs through this study.

Reference:

Prince, A. and Smolensky, P. (2004). *Optimality theory: constraint interaction and generative grammar*. Blackwell Publishing.

Word Count: 434

VERBIFICATION IN THE WRITINGS ON ENGLISH LEARNING AREA OF GRADE 9 STUDENTS

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ABSTRACT

This study investigated the verbification in the writings on English subject of Grade 9 students. The researcher employed descriptive method of research and it used purposive sampling technique. The essays of the Grade 9 students for the third quarter were being subjected for analysis. A total of 101 verbified words from 52 Grade 9 students were analyzed. The Oxford American Dictionary was used to check the existence and definition of each verbified words. The Equivalent Assessment of Nababan (2012) was used to analyze the grammatical functions and effects of each verbified words to the sentences being used in the essays. In light of the findings of the study, the researcher concluded that the three word formation processes exist in the 101 verbified words used in the essays. These are Affixation, Back-formation, and Conversion. Moreover, there are words being verbified which the root words do not exist in the Oxford American Dictionary. Some of these words are online applications and game. Students verbified words not just as part of the social media lexical items, but also in academic setting, like it is part of the new feature of language. The means of expressing is widely becoming the ground of producing new lexicons which has two outcomes in the world of language: to be corrected, or to just be accepted and used as long as people can connect and undesrtand each other.

Word Count: 243

Keywords: verbification, essay writing, analysis, word formation

<u>The Syntax of Phonology: Mirror-Image Rules</u>

Langacker (1969) and Anderson and Anderson (1974) provide a comprehensive review of mirror-image rules in phonological computations, but the formalisms highlighted fail to capture certain generalizations. For instance, Anderson and Anderson (1974) propose the following notational convention for mirror-image rules:

(1) x →y % a __ b = {x →y / a__b ***OR*** x →y / b __a}

However, this notation erroneously assumes that such rules always operate by creating mirror-images of the entire environment. This is clearly not true, as illustrated by the Greenlandic assibilation pattern (Miller, 1976):

(2) /iki # tit / →[ikisit] /iga # tit/ →[igatit]
/tikit # aq/ →[tikisaq] /*tikit # tuq/* →[tikittuq]

Here an underlying /t/ surfaces as a [s] intervocalically after an /i/ *so long as there is a morpheme boundary (#) on one side* of /t/. In the rule given in (3) only the portion contained between the asterisks form the mirror-image.

(3) /t/ →[s] / /i/ * #___*V

Anderson and Anderson's (1974) syntax would inaccurately include both the preceding */i/* and following V (any vowel) in the mirror-image. Likewise, while Bach's (1968) *neighborhood convention* (4) fails to account for *locality* in vowel harmony rules, Langacker's (1969) convention in (5) will fail to capture rules that require triggers on both sides of the target.

(4) x →y / z (5) a b x z c → 1 2 [3 y] 4 5 c z x b a → 5 4 [3 y] 2 1
1 2 3 4 5 5 4 3 2 1

The lack of the environment ('__') in (4) implies that x turns into y when there is an adjacent z to either the left or right of x. The indices in (5) are meant to capture the same fact.

I propose an alternative syntax for phonological computations that make use of quantifiers (Reiss, 2003) and precedence relations (Pappilon, 2020) to address these issues. Rules are functions that map an input string with a certain precedence link to a corresponding output string. In the re-analysis for Greenlandic in (5) below, the output is derived by first decomposing the input string into a precedence link consisting of ordered pairs, and then using quantificational logic to affect structural change over this link.

(5) /iki # tit / →[ikisit] /tikit # aq/ →[tikisaq]

Input 1: /iki # tit /
Precedence Link 1: <#,i><i,k><k,i><i,#>**<#,t>**<t,i><i,t><t,%>
Input 2: /tikit # aq/
Precedence Link 2: <#,t><t,i><i,k><k,i><i,t>**<t,#>**<#,a><a,q><q,%>
Rule: /t/ → [s] / /i/ __ V ∀ /t/ ∈ (<#,t>, <t,#>)
<u>*In English*</u>*: /t/ becomes /s/ between /i/ and V so long as /t/ satisfies one of the precedence relations* (<#,t>, <t,#>)
Output 1: [ikisat]
Output 2: [tikisaq]

In my talk I will present additional evidence from voice and place assimilation in Bangla, as well as Assamese vowel harmony, to illustrate that besides being able to capture the entire range of environments for mirror-image rules, the proposed formalism can also collapse bidirectional assimilations into single rules and account for rules that require triggers on both sides of the target.

Word Count: 499

References:

Anderson, S. R., & Anderson, S. R. (1974). *The organization of phonology*. Academic Press.

Bach, E. (1968). Two proposals concerning the simplicity metric in phonology. *Glossa*, *2*(2).

Langacker, R. W. (1969). Mirror image rules II: lexicon and phonology. *Language*, 844–862.

Miller, D. G. (1976). On mirror-image rules. *Linguistic Inquiry*, *7*(2), 383–388.

Papillon, M. (2020). *Precedence and the Lack Thereof: Precedence-Relation-Oriented Phonology*.

Reiss, C. (2003). Quantification in structural descriptions: Attested and unattested patterns.

Linguistic Review, *20*(2/4), 305–338.Ross, J. R. (1967). *Constraints on variables in syntax.*

Ross, J. R. (1967). *Constraints on variables in syntax.*

Ross, J. R. (1971/2014). *Gapping and the order of constituents*. De Gruyter Mouton**.**

There is no Uniquely Optimal Sonority Hierarchy:
A Phonotactic Investigation of 496 Languages Adopting 40 Sonority Hierarchies

[BACKGROUND]. The SONORITY SEQUENCING PRINCIPLE (SSP) is a fundamental governing principle of syllable structure (Clements, 1990; Prince & Smolensky, 1993/2004) but it has been challenged repeatedly, among other reasons for the large range of sonority hierarchies that have been proposed, which diverge in their granularity and their specific rankings. Granularity ranges from scales with two sonority classes, [sonorants > obstruents] (Zec, 2007), to five (Clements, 1990), six (Sievers, 1876), nine (Gnanadesikan, 1997), ten (Jespersen, 1904), eleven (Selkirk, 1984), to as high as seventeen (Parker, 2008). Specific rankings have been disputed for: rhotics vs. laterals; fricatives, affricates vs. plosives; voiceless vs. voiced fricatives, affricates and plosives; as well as the ranking of laryngeal segments like /h, ʔ/ (Gnanadesikan, 1997; Parker, 2002). The abundance of sonority scales proposed reveals a long-standing unsettled problem—what is the most appropriate way to rank segments in the sonority scale? Should voiced stops rank higher than voiceless fricatives (Jespersen 1904) or the reverse (Harris 1989), or equally (Hooper 1972)? Should obstruents be divided at all? The persistent failure to reach agreement also raises a larger, crucial question: does one hierarchy clearly outperform others at a large cross-linguistic scale?

[METHODS]. I examine consonant clusters and their sonority contours in 496 languages, taken from two large lexical databases, Cross-Linguistic Colexifications (CLICS^2) (List et al., 2018) and AusPhon-Lexicon (Round, 2017). For word-initial onsets and word-final codas, I identify the presence or absence of SSP violations by adopting 40 different sonority scales. For example, a language with an onset cluster /ft/ does not violate the SSP when the simplest scale [sonorants > obstruents] is adopted, but it does present a violation for any scale that ranks [fricatives > stops]. I repeat this process 40 times adopting sonority scales that have two, four, and up to fourteen sonority classes, and examine the proportion of languages that violate the SSP for each sonority scale adopted, including when language relatedness is taken into account.

[RESULTS]. Results show around one third to one half of languages are found to contain consonant clusters that violate the SSP. The common SSP-violation is also true even for the simplest sonority scale [sonorants > obstruents], for which around one third of the languages are found to contain SSP-violating clusters (see Figure 1 and 2). No particular theoretical proposals for the sonority hierarchy (including proposed universal hierarchies) outperform others, in terms of predicting notably fewer violations cross-linguistically as long as voiceless sibilants and voiceless plosives are placed in the same sonority class (to the left of the black vertical lines in Figure 1 and 2). Disagreements over details of the sonority hierarchy (e.g., the ranking of liquids or obstruents) that have occupied a bulk of literature on the SSP have little empirical import once measured against a large language sample as many languages are found to violate the SSP due to onset sonorant-obstruent or coda obstruent-sonorant consonant clusters. Therefore, from the perspective of empirical predictions, it appears that there is no uniquely optimal sonority hierarchy.

[**Word Counts**] 496

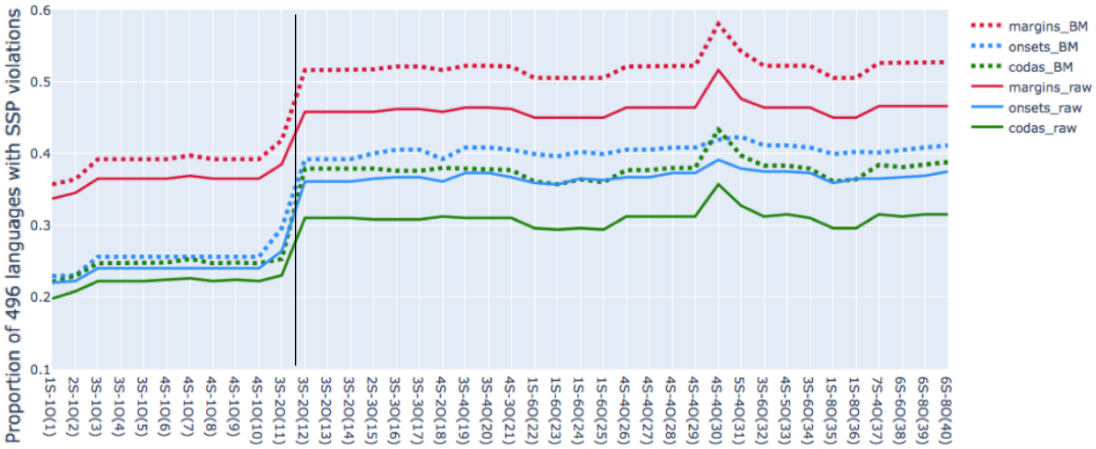

Figure 1 Proportions of 496 languages with SSP-violations in onsets, codas and in margins (i.e., either onset or coda) when affricates and homorganic nasal-stop sequences are treated as ***sequences****. Raw = simple proportion; Wtd = genealogically weighted proportions. Hierarchies are arranged by the number of sonorant (S) and obstruent (O) classes.*

Figure 2 Proportions of 496 languages with SSP-violations in onsets, codas and in margins (i.e., either onset or coda) when affricates and homorganic nasal-stop sequences are treated as ***single segments****. Raw = simple proportion; Wtd = genealogically weighted proportions. Hierarchies are arranged by the number of sonorant (S) and obstruent (O) classes.*

SELECTED REFERENCES

Clements, G. (1990). The role of the sonority cycle in core syllabification. In J. Kingston & M.Beckman (Eds.), *Papers in Laboratory Phonology I: Between the grammar and physics of speech* (pp. 283-333). CUP. • Gnanadesikan, A. (1997). *Phonology with ternary scales.* (Ph.D.), University of Massachusetts, Amherst. • Harris, J. (1989). Sonority and syllabification in Spanish. In C. Kirschner & J. DeCesaris (Eds.), *Studies in Romance linguistics* (pp. 139-153).Benjamins. • Hooper, J. (1972). The syllable in phonological theory. *Language, 48*(3), 525-540. • Jespersen, O. (1904/1913). *Lehrbuch der phonetik* (5 ed.). Teubner. • List, J.-M., et al. (2018). Database of cross-linguistic colexifications. • Parker, S. (2002). *Quantifying the sonority hierarchy.* (Ph.D.), University of Massachusetts, Amherst • Parker, S. (2008). Sound level protrusions as physical correlates of sonority. *Journal of Phonetics, 36*(1), 55-90. • Prince, A., & Smolensky, P. (1993/2004). *Optimality Theory: Constraint interaction in generative grammar*. Blackwell. • Round, E. (2017). *The AusPhon-Lexicon project: 2 million normalized segments across 300 Australian languages*. Presented at the 47th Poznań Linguistic Meeting. • Selkirk, E. (1984). On the major class features and syllable theory. In M. Aronoff & R. Oehrle (Eds.), *Language sound structure: Studies in phonology* (pp. 107-136). MIT Press. • Sievers, E. (1876). *Grundzüge der lautphysiologie zur einlührung in das studium der lautlehre der indogermanischen sprachen*. Nabu Press. • Steriade, D. (1982). *Greek prosodies and the nature of syllabification.* (Ph.D.), MIT. • Zec, D. (2007). The syllable. In P. de Lacy (Ed.), *Handbook of Phonology*. CUP.

Types of Epenthesis in Hijazi Arabic

In Hijazi Arabic (HA), there are two main types of epenthesis. The two main types are syllable structure-driven epenthesis (SSD epenthesis) and sonority-driven epenthesis (SD epenthesis). The default vowel for each type of epenthesis is different. For SSD epenthesis, the default epenthetic vowel is [a], whereas the default epenthetic vowel for SD epenthesis is [i].

The motivation for SSD epenthesis is the avoidance of word-internal superheavy syllables. For example, the stray consonant in the intermediate form [baː.b.na] (< /baːb-na/) receives the epenthetic vowel, resulting in the surface form [ˈbaː.b**a**.na] "our door". The motivation for SD epenthesis is the avoidance of word-final rising-sonority coda clusters. For example, the word /lakm/ surfaces as [ˈla.kim] "punching" with an epenthetic [i].

In both SSD epenthesis and SD epenthesis there is a relationship between the type of prosodic unit where epenthesis occurs and the quality of the default epenthetic vowel that seems to follow De Lacy (2006). De Lacy (2006) argues that variation in the quality of the epenthetic vowel across languages can be analyzed as the result of competing constraints, imposed by different Designated Terminal and non-Terminal Elements (DTEs & Non-DTEs). DTEs refer to the head of a given prosodic unit, such as a mora, syllable, or foot, while non-DTEs refer the non-head positions of the prosodic unit. He also argues that the universal sonority hierarchy of vowels is linked to these prosodic units (DTEs & Non-DTEs).

According to de Lacy, low vowels tend to be favored as epenthetic vowels in DTE positions due to their high sonority, whereas high vowels such as [i, u], tend to be epenthesized in non-DTE positions—that is, in unstressed syllables, moras, or feet. Therefore, in HA, the vowel [a] strengthens the weak degenerate syllable by forming the nucleus of the newly created syllable, which contains the previously unsyllabified consonant.

The outcome of SD epenthesis is that the default vowel [i] is epenthesized between the two coda consonants, forming a CVC syllable after a light syllable. The vowel [i] is epenthesized in the non-DTE. The universal split-margin constraints distribute consonants in syllable margins based on their sonority profile (Baertsch 2002; Baertsch & Davis 2009). The quality of the SD default epenthetic vowel is a result of the interaction between two types of universal markedness constraints, the non DTE of the foot and the universal place markedness constraints as described in Lombardi (2002), among others.

/lakm/ "punching"	$*O_2N_1]_\sigma$	DEP	$*-\Delta_{Ft}\geq a$	*[DORS]	$*-\Delta_{Ft}\geq\{i,u\}$	*[COR]	*[PHAR]
a. [lakm]	*!						
☞ b. [ˈla.kim]					*	*	
c. [la.kam]			*!		*		*
d. [la.kum]				*!	*		

Beyond that, the quality of the nondefault SD epenthetic vowel, which is affected by the stem vowel or one of the last two consonants in the word, is analyzed in detail. The study also recognizes a third type of epenthesis triggered by the OCP Principle in which two adjacent identical or similar consonants are avoided to surface faithfully in the syllable coda.

References

Baertsch, K. (2002). *An Optimality Theoretic Approach to Syllable Structure: The Split Margin Hierarchy* (Unpublished doctoral dissertation). Indiana University, Bloomington.

Baertsch, K. & Davis, S. (2009). Strength relations between consonants: A syllable-based OT approach. In K. Nasukawa & P. Backley (Eds.), *Strength Relations in Phonology* (pp. 285–316). Berlin, Germany: Mouton de Gruyter.

De Lacy, P. V. (2006). *Markedness: Reduction and Preservation in Phonology.* Cambridge: Cambridge University Press.

Lombardi, L. (2002). Coronal epenthesis and markedness. *Phonology*, *19*, 219–251.

Word Count (excluding references): 492

Wh-Questions and Resumption in Sewama Mende

In this talk I provide the first comprehensive description and analysis of wh-questions in Mende, a Mande language with canonical SOV order spoken in Sierra Leone. I focus on four topics: the two wh-strategies utilized in the language, the distinction between 'why' and 'how' compared to other wh-words, the use of resumptive pronouns, and island phenomena.

First, I show how Mende has both in-situ and fronted wh-questions in both local and long-distance questions. In the in-situ question (1b) the wh-word is marked with the focus marker *lɔ*, while in the focus-fronted question the wh-word is marked with *mia* (1c).

(1) a. Peter mahe-i lɔ-nga — statement
Peter chief-DEF.SG see-PRF
'Peter has seen the chief'

b. Peter **yɔ**-lɔ lɔ-nga — in-situ question
Peter who-FOC see-PRF
'Who has Peter seen?'

c. **yɛ**-mia Peter *ngi* lɔ-nga — ex-situ question
who-FOC Peter 3SG see-PRF
'Who has Peter seen?'

Second, I show that 'when' and 'how' pattern differently from the other wh-words, in that they can occur in only one position, while the latter can be either in-situ or focus-fronted (c.f. (1b) and (1c)). (2) shows that *migbe* 'when' can occur only in the focus-fronted position, while (3) shows that *ye* 'how' occurs only in the position following the subject.

(2) {**migbe mia**} Peter lɛ-ni nguli-i hun {*migbe lɔ}
when FOC Peter climb-PST tree-SG.DEF on
'When did Peter climb the tree?'

(3) {*ye} Peter {**ye**} lɛ-ni nguli-i hun {***ye**}
how Peter how climb-PST tree-DEF.SG on how
'How did Peter climb the tree?'

Third, I demonstrate the use of resumptive pronouns. A-bar movement in Mende leaves an obligatory resumptive pronoun. In (4) the third person plural resumptive pronoun *ti* is found in the in-situ position of the wh-word, whereas in (1c) the singular third person plural resumptive pronoun *ngi* is used.

(4) **ye-ni**-mia Peter *ti* lɔ-nga
who-PL-FOC Peter 3PL see-PRF
'Who (PL) has Peter seen?'

Finally, I show that resumptive pronouns in Mende cannot rescue island violations, unlike many languages (McCloskey 2017). (5a) shows a matrix clause with a relativized object, while (5b) shows that the wh-phrase cannot move out of the relative clause island, even with a resumptive pronoun.

(5) a. John mahe-i tatu-i-lɔ [i nike-i-sia majia-ni kpaa hun]
John chief-DEF.SG praise-PST-ASP 3SG cow-DEF-PL sell-PST farm on
'John praised the chief that sold the cows on the farm?

b. ***gbɛ**-nga-mia John mahe-i tatu-i-lɔ [i *ti* majia-ni kpaa hun]
what-INDEF.PL-FOC John chief-DEF.SG praise-PST-ASP 3SG 3PL sell-PST farm on
'What did John praise the chief that sold ___ on the farm?

Based on fieldwork with native speakers in Bo, Sierra Leone, this research provides a base-line description of Mende interrogatives that can be used in researching the Mande language family. It also contributes to the broader understanding of interrogatives cross-linguistically, specifically in regard to resumptive pronouns, wh-movement, and island violations.

(469 words)

Reference

McCloskey, James. 2017. Resumption. In Everaert, Martin, and Henk C. van Riemsdijk (eds.) *The Wiley Blackwell Companion to Syntax, Second Edition* 1-30. Hoboken, NJ: John Wiley and Sons.

Word-final devoicing in Brazilian Portuguese and L2 English

This study examines word-final devoicing in Brazilian Portuguese (e.g. sedes ['sɛ.ts] ~ ['sɛ.dʒis] ‘headquarters’) and in English as a Second Language (e.g. sides [saɪts] ~ [saɪdz]). The goal was to assess whether different phonological environments and task types influence the voicing property of the final sibilant. As it is known, word-final English sibilants are prone to progressive assimilation (e.g. cups [kʌps], bags [bægz]), rather than regressive assimilation – as it occurs in Brazilian Portuguese (mês [mes] ‘month’, mês anterior [mez ɐ̃.te.ɾi.ˈoɾ] ‘previous month’). Thus, an experiment was designed to test the production of (stop + sibilant) clusters in English nouns and in Brazilian Portuguese forms undergoing sound change. Harmonics-to-noise ratio (HNR) was used to measure the degree of sibilant voicing. Results showed that Brazilian Portuguese speakers tend to preserve a voiceless sibilant even in contexts where it hadn’t been previously expected, and this occurs regardless of the visual presentation of the words. Moreover, L2 English HNR rates showed that fully voiced sibilants are strongly influenced by the phonological environment, including preceding epenthetic vowels. However, voiced (stop + sibilant) clusters still pose a challenge to Brazilian speakers of L2 English. These findings are discussed in light of the Exemplar Model in L2 Phonology (EMPL2) (Cristófaro-Silva, Guimarães, 2021; Cristófaro-Silva, Mendes Jr., 2021). The analysis based on the EMPL2 showed that robust patterns from the L1 are adopted in L2, including fine phonetic detail that reflects subphonemic properties.

Keywords: Word-final devoicing, Brazilian Portuguese, L2 English, Exemplar Model.

References:

CRISTÓFARO-SILVA, Thaïs; GUIMARÃES, Daniela. Seminário de Ciências da Fala [Speech Sciences Seminar]. Belo Horizonte: Federal University of Minas Gerais, 2021.

CRISTÓFARO-SILVA, Thaïs; MENDES JR., Wellington. Plural formation in English: a Brazilian Portuguese case study. To be published in Second Language Pronunciation: Different Approaches to Teaching and Training. De Gruyter Mouton, 2021.

Wusun *Bujiu* 'Caretaking Father' and Tokharian *Pācar* 'Father'

Wusun (烏孫) was an influential tribal polity in ancient Central Asia. According to *Hanshu* (61.2692), Great Yueshi attacked and killed the king of Wusun, his newborn son was saved and taken by Xihou (翎侯) Bujiu (布就) who was a caretaking father. Thus, the Wusun title Xihou and its holder Bujiu became known in 177 BCE as generally agreed in the field of study. Commentators to *Hanshu* offered their interpretations of the names *bujiu* and *xihou*. Li Qi (李奇) considered *bujiu* as a courtesy name and *xihou* as an official title in Wusun serving as a caretaking father of the baby king. Yan Shigu (顔師古) argued that *bujiu* is alternative to the official title *xihou*. The two commentators converge in treating *xihou* as an official title and yet disagreeing if *bujiu* is a courtesy name or an official title.

Understanding of the meaning of *bujiu* depends on our careful reading in what context *bujiu* occurs in *Hanshu*. It occurs only once in *Hanshu* in the phrase of 傅父布就翎侯 wherein it is flanked by two titles 傅父 and 翎侯. Note that its preceding 傅父 (*fùfù*) literally means 'teacher father' and contextually can be translated as 'caretaking father' in opposition to 'biological father'. From this immediate semantics, I shall argue that *fùfù* and *bujiu* are in coindexation between the semantically translated *fùfù* and the phonetically transcribed *bujiu* which means 'father' in Wusun, thus repeating its preceding *fùfù* 'caretaking father'. From the Chinese dialectal perspectives, *bujiu* as so read in Putonghua pronounces *poučau* in Cantonese and *pučiu* in Hakka, providing a basis for being reconstructed as **počə*. In this way, the Wusun *bujiu* could be connected with Tokharian *pācar~pācer* 'father', which were most probably inherited from Yueshi and shared by Wusun as both being adjacent Indo-European languages. Just see what Bujiu did for the newborn baby in such a dangerous situation, we would understand Bujiu's occupation as a caretaking father. If my suggestion is right, this etymological connection presents a piece of evidence in favor of the proposed ethnic and linguistic linkage between Yueshi and Tokharian.

Concerning the commentators' viewpoints, Li Qi's 'courtesy name' interpretation is plausible in the sense that the ancient transcriber had heard of *bujiu* as a courtesy name, since we cannot expect him/her to understand the Wusun speech. Furthermore, *bujiu* as an occupation could have turned to an ad hoc identity as a courtesy name reminiscent of the shift from 'blacksmith, armorer' to the name Smith in English. Yan Shigu's 'alternative to *xihou*' interpretation seems unconvincing.

Significantly, Wusun *bujiu* (**počə*) and Tokharian *pācar~pācer* are connected with Wahon *boǰa* and Sariqul *boǰo* 'husbands of sisters' and further with Written Mongolian *baǰa* 'husbands of sisters'. Phonetically, Tokharian *pācar~pācer* and Mongolian *baǰa* present no problem at all. Tokharian has the phoneme /p/ without /b/ while Written Mongolian has /b/ without /p/ except for those occurring in foreign words. (500 words)

References

Hanshu (漢書 Book of Han) compiled by Ban Gu in 82.
http://hanchi.ihp.sinica.edu.tw/ihp/hanji.htm.

Adjunction without pair-Merge

Issue: Chomsky (2004, 2015) argues that adjunction structure is due to pair-Merge, which produces an ordered pair <X,Y>. Pair-Merge, however, is called into question since it violates the desiderata on MERGE: MERGE operates on the workspace, producing the simplest object {X,Y}. In this paper, I reconsider adjunction under MERGE, claiming that the properties of adjunction (retention of structural properties and inaccessibility of an adjoined element) follow from MERGE.

Proposal: Take phrasal adjunction in (1), where PP is adjoined to VP:

(1) I [read the book [PP during the concert]].

In the derivation, VP and PP are merged, which produces an XP-YP set (=(2a)). (2a), as it is, will incur a labeling problem since the two heads (V and P) do not agree. For labeling, suppose that VP moves out to merge with (2a), which produces (2b), where VP in α turns into a copy (<u>VP</u>) and becomes invisible, thanks to which α is labeled (Chomsky 2013). (2b), however, now violates Determinacy because the derived output includes two terms of VP, which causes indeterminacy for further computation (Chomsky 2019). I claim that this problem can be solved by Transfer. Assuming that Transfer applies freely (Chomsky 1998), I argue that α is transferred upon movement of VP, which renders one term of VP inaccessible. The derived structure is (2c), where β is labeled V since the head is the closest to minimal search:

(2) a. $\{_{\alpha}$ VP, PP$\}$
b. $\{_{\beta}$ VP, $\{_{\alpha}$ <u>VP</u>, PP$\}\}$
c. $\{_{\beta}$ VP, $\{_{\alpha}$ <u>VP</u>, PP$\}\}$

The proposed analysis deduces the properties of adjunction. When PP is adjoined to VP, the whole structure β is "VP" because it is labeled V. An adjoined element is put on a "different plane," being inaccessible (Chomsky 2004) because it has been transferred together with α. The ungrammaticality in (3) is also explained: the adjunct is inaccessible (=(2c)) and an element inside it cannot be extracted:

(3) *Which concert did you read the book [during t]?

On the other hand, adjunct movement is unproblematic under the proposed analysis: in (4), PP moves out to Spec,*v*P, which allows α to be labeled since <u>PP</u> is invisible for movement; Determinacy is also respected for transfer of α:

(4) During which concert did you read the book?

(5) a. $\{_{\alpha}$ VP, PP$\}$
b. $\{v, \{_{\alpha}$ VP, <u>PP</u>$\}\}$
c. $\{$PP, $\{v, \{_{\alpha}$ VP, <u>PP</u>$\}\}\}$

Implications: The proposed analysis has two related implications. The first is that a moved element is not frozen for extraction, with movement possible from such an element (Bošković 2018, Collins 2005). As (6) shows, the object can move out of VP, which, as shown in (2), has moved in VP adjunction:

(6) Which book did you [read [during the concert]]?

The second implication is that the Subject Condition and the Adjunct Condition are not unified as movement is possible from a moved element (Stepanov 2007). I argue that the Subject Condition is due to Determinacy: subject movement yields two terms of the subject in the workspace, which causes indeterminacy. (500 words)

References: Bošković, Ž. 2018. On movement out of moved elements, labels, and phases. *LI* 49. Chomsky, N. 1998. Some observations on economy in generative grammar. In *Is the best good enough?* MIT Press. Chomsky, N. 2004. Beyond explanatory adequacy. In *Structures and beyond*. Oxford University Press. Chomsky, N. 2013. Problems of projection. *Lingua* 130. Chomsky, N. 2015. Problems of projection: Extensions. In *Structures, strategies, and beyond*. John Benjamins. Chomsky, N. 2019. Some puzzling foundational issues. *CatJL Special Issue, 2019*. Collins, C. 2005. A smuggling approach to the passive in English. *Syntax* 8. Stepanov, A. 2007. The end of CED? *Syntax* 10.

Focus as a Dependent Information Marker: A Case of Shilluk

Shilluk, which belongs to Nilo-Saharan, displays a peculiar Case/information marking pattern. If there are two arguments, two different types of constructions are generated. First, if the object (O) occupies a preverbal position, Agent (A) co-occurs with either *ìɪ* or *īɪ*. Second, if A occurs in the preverbal position, and the postverbal constituent, O, must be focused.

(1) a. O V A [ìɪ/īɪ A] b. A V **O**

It is controversial with respect to the grammatical status of *ìɪ/īɪ* . There are two different views: it is an ergative case marker (Miller and Gilley 2001), or it is a preposition (Remijsen and Ayoker 2018). Regardless of whether it is a Case marker or not, it is possible to distinguish between A and O in (1a); *ìɪ/īɪ* signals that its complement is an Agent. However, there is no morphological marking to indicate which is A and which is O in (1b). Instead, focus distinguishes between them: O must be focused. The markedness of (1b) is not an idiosyncratic property of Shilluk. Päri, another Nilo-Saharan, displays the same pattern: if there is no marking to distinguish between A and O, O is focused. This paper shows that this phenomenon can be explained if we extend the dependent Case approach to information marking.

In (1b) A is a topic phrase and O is a focus phrase, whereas in (1a) O is a topic phrase. This pattern can be explained if we extend the dependent Case approach to information marking. According to the dependent Case approach, if there are two NPs in a Case domain, one NP is assigned dependent Case (accusative or ergative), and if there is only one in the domain, it is assigned default Case (nominative or absolutive Case) (Marantz 1991, Baker 2015, and Preminger 2014). In nominative/accusative languages, for instance, NP2 is assigned accusative in (2a), and NP1 is assigned nominative Case in (2b).

(2) a. [NP1 NP2]: Assignment of Dependent Case to NP2
b. [NP1 NP2-$_{\text{Acc}}$]: Assignment of Default Case to NP1
c. [NP1-$_{\text{Nom}}$ NP2-$_{\text{Acc}}$]

Let us extend this approach to focus/topic assignment. If two NPs are not morphologically distinguished in an information domain, the second NP is assigned focus—dependent information marking, and if there is only one NP in the domain, it is assigned topic.

(3) a. [A O]: Assignment of Dependent Information Marking to O
b. [A O$_{[\text{focus}]}$]: Assignment of Topic to A
c. [A$_{[\text{Topic}]}$ O$_{[\text{focus}]}$]

We can now explain why A is interpreted as a topic, whereas O is focused in (1b). We can also explain why O is construed as a topic in (1a). In (1a) O is the only Caseless argument, and so it is assigned topic.

To recapitulate, (i) there is parallelism between information marking and Case marking, and (ii) information marking can distinguish between A and O when Case fails to distinguish them. This paper shows that this approach can be extended to many other Information Structure-based languages like Korean.

Glottal Stop Variation in Classical Arabic and Taizzi Yemeni Arabic: OT-based Optionality Analysis

This paper analyzes optional [ʔ] deletion in Classical Arabic and a modern Arabic dialect. This deletion is typically accompanied by lengthening or gliding of an adjacent vowel, and deletion can be blocked when this lengthening/gliding is not possible. This paper assesses the ability of various OT-based theories of optionality to account for [ʔ] deletion, arguing that the rank-ordered model of EVAL (ROE; Coetzee 2006) provides a better account than alternatives such as partially ordered grammars (PO; Anttila 1997, 2007) and serial variation (SV; Kimper 2011).

The constraint HAVEPLACE (HP) triggers deletion because [ʔ] lacks place features. When a coda [ʔ] is deleted, the preceding vowel is lengthened to satisfy MAX-μ ([muʔna] ~ [mu:na] 'subsistence'). If this vowel is already long, it gives rise to geminate glide instead ([xɑtˤi:ʔah]~[xɑtˤijjah] 'sin'). When an onset [ʔ] is deleted, ONSET compels insertion of a glide whose features match those of the preceding vowel ([miʔah] ~ [mijah] 'a hundred'). When no such glide is available (i.e. when the preceding vowel is low), ONSET blocks deletion ([raʔa] ~*[raɑ̯a] 'saw'). When in word-final position, [ʔ] deletes, and its preceding long vowel shortens ([masaaʔ]~[masa] 'evening'. In a word with multiple [ʔ], they delete independently of each other ([luʔluʔah]~[lu:luwah]~[lu:luʔah]~ [luʔluwah] 'pearl'). [ʔ] in onset position can also delete with no compensation if ONSET is satisfied by onset reassignment or metathesis ([ʔalʔaħmar]~[ʔalaħmar]~ [ʔalħamar] 'the red'). While other situations present additional complications, these are the core facts.

ROE assumes a cut-off line somewhere in the constraint ranking. Constraints above the cut-off line eliminate candidates as normal, but any candidate that survives to the cut-off line is a possible output. MAX-ʔ and HP are then below the cut-off to yield variants presented above. This model seems to be able to capture all these possible outputs including those of 'pearl'. See (1).

(1) ROE /luʔluʔah/	ONS	Max-μ	Max-ʔ	HP
a. ☞ luʔ.lu.ʔah				***
b. ☞ lu:.lu.wah			**	*
c. ☞ lu:.lu.ʔah			*	**
d. ☞ luʔ.lu.wah			*	**

(2) PO / luʔluʔah/	Max-ʔ	HP	IDENT-length
a. ☞ luʔ.lu.ʔah		***(!)	
b. ☞ lu:.lu.wah	**(!)	*	**
c. (☜) lu:.lu.ʔah	*(!)	**(!)	*
d. (☜)luʔ.lu.wah	*(!)	**(!)	*

Alternative theories fail to fully capture the variation in the data. In PO, the ranking can vary across tableaux, potentially giving multiple outputs for one input. This model fails to capture all variants of /luʔluʔah/ as seen in (2) above. Under either of PO's rankings, the winner will have to maximally satisfy the higher of the two relevant constraints, but the outputs it does not produce only partially satisfy those constraints--they neither delete all the glottal stops nor fully preserve them, and that problem remains no matter how many rankings you allow for PO. Serial Variation, which uses PO in a serial derivation, also fails to capture this variation.

To conclude, this paper supports the ROE model of optionality and shows some shortcomings for the PO and Serial Variation models of optionality.

(Word count: 500)

References

Anttila, A. (1997). Deriving variation from grammar. *AMSTERDAM STUDIES IN THE THEORY AND HISTORY OF LINGUISTIC SCIENCE SERIES 4*, 35-68.

Anttila, A. (2007). Variation and optionality. The Cambridge handbook of phonology, 519-536.

Coetzee, A. W. (2006). Variation as accessing ‘non-optimal’candidates. Phonology, 23(3), 337-385.

Crosswhite, K. (1999). Intra-paradigmatic homophony avoidance in two dialects of Slavic. *UCLA working papers in linguistics*, *1*(3), 48-67.

Kimper, W. A. (2011). Locality and globality in phonological variation. Natural Language & Linguistic Theory, 29(2), 423-465.

McCarthy, J. J. (2000). Harmonic serialism and parallelism. *Linguistics Department Faculty Publication series*, 40.

Prince, A., & Smolensky, P. (2004). Optimality theory: constraint interaction in generative grammar Malden. *MA: Blackwell*.

Smolensky, P., & Prince, A. (1993). Optimality Theory: Constraint interaction in generative grammar. *Optimality Theory in phonology*, *3*.

Manner/Result complementarity and the unselected accusative clitic *ga* 'it' in Serbo-Croatian

According to the so-called Manner/Result complementarity generalization, non-stative verbs are classified as either manner or result verbs: the former specify as part of their meaning a manner of carrying out an action (e.g. *laugh*), while the latter specify the coming about of a result state (e.g. *empty*). This distinction finds support in the patterns of argument realization, e.g. while manner verbs are found with unspecified and non-subcategorized objects in non-modal, non-habitual sentences, result verbs are not (Rappaport Hovav & Levin 2010; cf. also Rappaport Hovav 2017, 2021, but see e.g. Beavers & Koontz-Garboden 2020 for a criticism). In this talk, we explore the unselected accusative clitic *ga* 'it' in Serbo-Croatian, which is always realized as 3rd person neuter/masculine singular, exemplified in (1-4), in the light of Manner/Result complementarity. We argue that this accusative clitic is used with intransitive verbs to impose a boundary onto a scale provided by the result component when combined with result verbs (1-2) or onto a manner-like scale (e.g. a quality or intensity scale) when combined with manner verbs (3-4). In both cases, an implicature is triggered that the highest range of a scale is reached, resulting in the emphasis for intensity in the sense of Beltrama & Trotzke 2019. (In all the examples below this contribution of the clitic *ga* 'it' is assumed.) This inference can be made explicit by using the intensifying particle *baš* 'exactly', as in (2) and (4), which is used to intensify either the quantity of the result or the manner/quality denoted by a predicate (cf. Mišković-Luković 2010).

(1) Ako ovo ne važi, pada teorija. Onda sam **ga** nadrljala!
if this not be_valid.3sg, falls theory then Aux it.Acc got_into_trouble
'If this is not the case, the theory falls. Then I get into trouble.'

(2) Baš **ga** je zahladnelo!
exactly it.Acc Aux got_cold
'It got extremely cold.'

(3) Vidi Milana, pravi profesionalac! Kako **ga** samo đuska.
look M. true professional how it.Acc just dances
'Look at Milan, a true professional! How is he just dancing!'

(4) Napolju **ga** baš grmi, ko topovi da udaraju.
outside it.Acc exactly thunders like cannons Comp strike.3pl
'There are many thunderstorms outside, as if cannons were striking.'

Cross-linguistically, the accusative case is, at least under some uses and in some languages, linked to the aspectual meaning of boundedness or event delimitation (Kagan 2020). According to Kagan (2020), the accusative case-marking with such a function tends to occur in the following three domains: the direct objects (for instance, incremental themes), the adjuncts (e.g. the (counterparts of) aspectual *for*-adverbials), the complements of prepositions (e.g. the goal phrases, as opposed to the locative source phrases). The unselected accusative clitic that we consider represents yet another instantiation of the delimitation role of the accusative case. Crucially, it delimits the event only indirectly, by delimiting the scale provided by the result and manner arguments.

Word count (excluding references): 498.

References. **Beavers, J., & Koontz-Garboden, A. (2020).** *The Roots of Verbal Meaning*. OUP ♦ **Beltrama, A., & Trotzke, A. (2019).** Conveying emphasis for intensity: Lexical and syntactic strategies. *Language and Linguistics Compass, 13*(7), e12343. ♦ **Kagan, O. (2020).** *The Semantics of Case*. Cambridge University Press. ♦ **Mišković-Luković, M. (2010).** Markers of conceptual adjustment: Serbian *baš* and *kao*. In M. N. Dedaić & M. Mišković-Luković (Eds.), *South Slavic Discourse Particles* (pp. 65–89). John Benjamins Publishing Company. ♦ **Rappaport Hovav, M. (2017).** Grammatically relevant ontological categories underlie manner/result complementarity. Proceedings of IATL 32, 77-98. ♦ **Rappaport Hovav, M. (2021).** Uncovering the Scale. WCCFL 39, April 11. ♦ **Rappaport Hovav, M., & Levin, B. (2010).** Reflections on manner/result complementarity. In E. Doron, M. Rappaport Hovav, & I. Sichel (eds.), *Syntax, Lexical Semantics, and Event Structure* (pp. 21-38). OUP.

Morphological properties of êbêra language from Alto Sinú (Colombia)

The embera group is made up of approximately 56,504 indigenous people who are located from the Darien province in Panamá, then through the colombian departments of Chocó, Antioquia, Córdoba, Caldas, Risaralda to Ecuador. This talk presents the general morphological properties of êbêra language from Alto Sinú, region located in the northern part of Colombia. The ethnic group called embera and its language ([êbêra] in phonetic writing) is part of the Chocó Linguistic Family. This classification is due not only to the linguistic aspect but also to the common socio-cultural characteristics. This family is made up of embera and waunán groups located in Colombia. The êbêra language spoken in Alto Sinú, as also happens in the other êbêra macroglosses, has morphological properties of an analytical insulating language; most grammatical morphemes are free morphemes, although the verb and the name have an inflectional morphology. There are also numerous prepositions to express grammatical categories and there are many auxiliaries. The analytical character lies in the lexicalization and grammaticalization of meanings that are implicit in other languages.

In êbêra language, the noun and the verb have inflectional morphology for the expression of some grammatical categories. For other categories they use postpositions. Nominals in the êbêra language have case marks. For the expression of ergativity in this language there are two split processes: (i) Suffixation of *-a* with the pronouns 1pers.sing., 1pers.pl.ext., 2pers.sing., 3pers.sing., 3 pers.pl.noext. (ii) Postponement of *ba (ra)* with 1pers.pl.ext. (*dayirâ*), 2pers.pl., 3pers.pl.ext., names, demonstratives, questions, name substitutes and indefinite. The instrumental case also postpones *ba (ra)*. Absolute / object cases are expressed with the alternating marks *–o* / *-ta*. The dative case marks *-a*, inesive locative, genitive *-de*, ablative *-deuba* are also suffixed. The name also suffixes the morpheme *-râ* that expresses the plural category of nouns and the morpheme *-ra* topic.

Locative cases, alative *eda*, limit *idu*, goal *ma*, and address and location morphemes are postponed. *bari* and *kakea* which express senses of "in honor of, instead of" and "because of" are also postponed. All the auxiliaries and morphemes are postponed to the verbal base *-ita* end of action, *bara* deontic modality, *buru* probability, and *ka* modal negation (by prohibition). In êbêra language the morphemes *-i-* verbalizer *-a* declarative, *-ta* non-agent / normalizer, *-si-* past tense, *-da-* plural, *-da* participle, *-ma* participle of result, *-ta* recessive, *-rua*, *-tua*, *rârua*, *-dutua* command morphemes are suffixed to the verbal base. All auxiliaries and the morphemes *ita* end of action, *bara* deontic modality, *buru* probability, and *ka* modal negation (by prohibition) are postponed to the verbal base.

References

Licht, D.(1995). *Fonología del embera-Chamí de Cristianía*. En: Rito Llerena Villalobos (Coord.). Estudios Fonológicos del grupo chocó. Lenguas aborígenes de Colombia. Descripciones 8. Bogotá: Universidad de los Andes.

Llerena, R. (1995). *Fonología Comparada de las Lenguas êpêra de Occidente (Jaidukama) y Oriente (Cristianía Alto Andágueda)*. En: Rito Llerena Villalobos (Coord.). Estudios Fonológicos del grupo chocó. Lenguas aborígenes de Colombia. Descripciones 7. Bogotá: Universida de los Andes.

(500 words).

Morphomic patterns in Old Catalan verb inflection

In this study, we deal with the presence of morphomic patterns in Old Catalan verb inflection. The term *morphome* refers to structures or patterns that are not related to syntax or phonology but obey purely morphological reasons (Aronoff 1994: 25). This concept forms part of the theoretical model of Autonomous Morphology (Booij 1997; Maiden *et al.* 2011; Cruschina *et al.* 2013), which has been applied to Catalan by authors like Querol (2010), Wheeler (2011), and Pérez Saldanya (2013). In Romance, the most prominent morphome cases are the allomorphs exhibited by irregular verbs in the stem or the stem extension. In this sense, Smith (2013: 248) has used the term *class morphome* to account for a morphological distribution in which every cell of the paradigm of a particular subset of a lexical category shares formal features. In Old Catalan, cases of organization according to morphomes within verbal inflection are already documented. Specifically, we find three different morphomic patterns: the L-pattern, the PyTA pattern, and the N-pattern.

The L-pattern refers to a distribution in which the first person of the present indicative and the whole present subjunctive exhibit a distinctive feature (Maiden 2018: 84). In Old Catalan, we detect several stem types: the first comprises stems characterized by a velar element that behaves like a stem extension. With the /g/ extension, there are verbs like *dir* 'to say': 1SG.PRS.IND *dic*, 3SG.PRS.SBJV *diga*. With the /sk/ extension, there are verbs like *nàixer* 'to be born': 1SG.PRS.IND *nasc*, 3SG.PRS.SBJV *nasca*. Another L-pattern type, recurrent in Old Catalan, is characterized by having a palatal stem, as in *deure* 'to owe' (1SG.PRS.IND *deig*, 3SG.PRS.SBJV *deja*) or *voler* 'to want' (1SG.PRS.IND *vull*, 3SG.PRS.SBJV *vulla*). On the other hand, there is the PyTA pattern, in which the verb tenses coming from Latin perfect forms also share a distinctive feature (Maiden 2018: 44). In Old Catalan, verb tenses coming from Latin perfect are the past simple, the *-ra* conditional, and the imperfect subjunctive. We also document several stem types of the PyTA pattern. Verbs such as *beure* 'to drink', among others, exhibit the /g/ extension in the forms coming from the Latin perfect: 3SG.PST.PFV *bec*, 3SG.COND *begra*, 3SG.PST.SBJV *begués*. Furthermore, verbs like *viure* 'to be alive', present the /sk/ extension in the PyTA forms: 3SG.PST.PFV *visc*, 3SG.COND *viscra*, 3SG.PST.SBJV *visqués*. Regarding non-velarized PyTA patterns, the sibilant forms stand out, which appear in verbs such as *prendre* 'to take': 3SG.PST.PFV *pres*, 3SG.COND *presera*, 3SG.PST.SBJV *presés*. Finally, there is the N-pattern, in which the first, the second, and the third person singular and the third person plural in the present indicative, present subjunctive, and imperative share

formal features that do not appear in the rest of the verb paradigm (Maiden 2018: 167). In Old Catalan, we find the N-pattern distribution in the inchoative verbs, such as *servir* 'to serve': 1SG.PRS.IND *servesc*, 3SG.PRS.IND *serveix*, 3SG.PRS.SBJV *servesca*. All in all, the regular appearance of formal alternations in stems, organized around the morphomes, reduced the irregularity, and helped speakers to acquire the inflectional paradigm.

Word count: 500

References

Aronoff, M. (1994). *Morphology by itself: stems and inflectional classes*. MIT Press.

Booij, G. (1997). Autonomous morphology and paradigmatic relations. In G. Booij & J. van Marle (Eds.), *Yearbook of Morphology 1996* (pp. 35–53). Springer Netherlands. https://doi.org/10.1007/978-94-017-3718-0_4

Cruschina, S., Maiden, M., & Smith, J. C. (2013). *The Boundaries of Pure Morphology: Diachronic and Synchronic Perspectives*. Oxford University Press.

Maiden, M. (2018). *The romance verb: morphomic structure and diachrony*. Oxford University Press.

Maiden, M., Smith, J. C., Goldbach, M., & Hinzelin, M. O. (Eds.). (2011). *Morphological Autonomy: Perspectives from Romance Inflectional Morphology*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199589982.001.0001

Pérez Saldanya, M. (2013). «Que sa il·lustre senyoria cullga o faça cullir dits fruits»: una aproximació històrica als verbs velaritzats. In E. Clua & M. R. Lloret (Eds.), *Qüestions de morfologia flexiva i lèxica del català. Volum d'homenatge a Joaquim Viaplana* (pp. 313–333). Institut Interuniversitari de Filologia Valenciana.

Querol, L. (2010). Els increments de l'arrel verbal en català i d'altres llengües romàniques. In K. Faluba & I. Szijj (Eds.), *Actes del Catorzè Col·loqui Internacional de Llengua i Literatura Catalanes. Budapest, 2006. Volum III* (pp. 285–296). Publicacions de l'Abadia de Montserrat.

Smith, J. C. (2013). The morphome as a gradient phenomenon: evidence from Romance. In S. Cruschina, M. Maiden, & J. C. Smith (Eds.), *The Boundaries of Pure Morphology* (pp. 247–261). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199678860.003.0013

Wheeler, M. W. (2011). The Evolution of a Morphome in Catalan Verb Inflection. In M. Maiden, J. C. Smith, M. Goldbach, & M.-O. Hinzelin (Eds.), *Morphological*

Autonomy: Perspectives From Romance Inflectional Morphology (pp. 182–209). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199589982.003.0010

On the absence of Superiority and Cross-over effects in Eton

Over the years, the literature has shown that unlike the assumption in earlier literature that there is superiority and cross-over effects in almost all languages (cf. Chierchia 1991; Chomsky 1995; Homstein 1995, 2001; Wiltschko 1998), there are actually languages without superiority and cross over effects (cf. Adesola 2006 for such argument for Yoruba). Eton, an understudied Bantu language spoken predominant in Cameroon by over 250,000 speakers (Wikipedia), has no superiority and (weak or strong) cross-over effects (SCO and WCO henceforth). The aim of this abstract is to add to the existing literature of languages without superiority and cross-over effects and propose an analysis for Eton.

Comparing sentences like (2a) and (2b-c), unlike English and some other languages where (2b-c) will be ungrammatical due to the preference for short movement over long movement (cf. Chomsky's (1995) *minimal link condition*) and also due to the fact that the probe (C) seeks to Agree with the closest goal (wh-phrase in this case), this is not the case in Eton. The examples in (3) and (4) show absence of WCO and SCO in Eton.

Following Hornstein's (1995, 2001) proposal that superiority actually reduces to the WCO effect, we propose a similar analysis for Eton. Hornstein's proposal sees a pair-list reading in multiple wh-questions where the in-situ wh-phrases are disintegrated into a bound pronominal and a nominal restrictor eg. *pro* + person = who; *pro* + thing = what (Adesola 2006). For example, (1b) shows the absence of superiority in Eton.

1. a) [$_{CP}$ Zá [$_{IP}$ á t_i kus-gè [*pro*$_i$ thing] (=jé)]]

b) [$_{CP}$ Jé [$_{IP}$ [*pro*$_i$ person] (=zá) á kus-gè t_i]]

(1b) will be ungrammatical in English due to Chomsky's (1977:201) *Weak Crossover Condition* that says that "a variable cannot be the antecedent of a pronoun to its left." (1a) will be grammatical because the pronoun is linked to a variable to its left. This is similar to what is found in WCO too where we would expect that (1c) should be ungrammatical, but this is not the case on a bound reading in Eton.

c) [CP Zá$_i$ [nyéklè nyé$_i$ a lógì t_i]]

Given Hornstein's theory, the acceptability of superiority in Eton equals the absence of WCO. We propose that this is due to null operator movement in Eton where the antecedent is external to the pronoun in the scope of the null operator thereby reducing the crossover effect.

Word count (excluding references): 513

Data

2. a) Zá á-kus-gè jé?
who 3SG-buy-PST what
Who bought what?

b) Jé zá á-kus-gè?
what who 3SG-buy-PST
Lit. What who buy?

c) Zá Jé á-kus-gè
who what 3SG-buy-PST
Lit. 'Who what buy?'

3. a) À$_i$ tì kám nyé-mén$_i$
3SG PROG trust him-self
'He trusts himself

b) Zá$_i$ [à$_i$ tì kám _t$_i$] SCO
Who 3SG PROG trust
'Who did he trust?' (* in English on a bound reading)

4. a) Nyéklè nyé$_i$ à lógé nyé$_i$
teacher his 3SG call.PST him
'His teacher called him.'

b) Zá$_i$ [nyéklè nyé$_i$ a lógì _t$_i$] WCO
who teacher his 3SG call.PST
'Who did his teacher call?' (* in English on a bound reading)

References

Adesola, Oluseye. 2006. On the absence of superiority and weak crossover effects in Yoruba. *Linguistic Inquiry* 37. 309–318.

Chierchia, Gennaro. 1991. Anaphora and dynamic binding. *Linguistics and Philosophy* 15:111-183.

Chomsky, Noam. 1977. *Essays on form and interpretation*. New York: North-Holland.

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

Hornstein, Norbert. 1995. *Logical Form: From GB to minimalism*. Oxford: Blackwell.

Hornstein, Norbert. 2001. *Move! A minimalist theory of construal*. Oxford: Blackwell.

Wiltschko, Martina. 1998. Superiority in German. In Emily Curtis, James Lyle, and Gabriel Webster, (eds.), *Proceedings of the 16th West Coast Conference on Formal Linguistics,* 431-446. Stanford, Calif.: CSLI Publications

On the evolution of some temporal adverbs into discourse markers
The case of RO *atunci* and *apoi*

Abstract

This paper aims to provide an overview of the evolution and development of temporal adverbs into discourse markers, specifically the changes Romanian temporal adverbs *atunci* 'then' and *apoi* 'afterwards' have undergone. It seeks to comparatively describe their pragmatic functions as a pragmatic marker and to identify the meanings underlying these functions in informal conversation. Special attention will be paid to the complete pragmaticalization of *apoi* versus the partial pragmaticalization of *atunci.* These changes will be explored using Romanian older texts from the 16th century until the 19th century (e.g., Varlaam, Coresi, Ivireanul, Maiorescu, Eminescu, Alecsandri) along with the Corpus of Spoken Romanian (IVLR).

Over the past few decades, discourse markers (henceforth, DMs) started to be explored extensively in the written and spoken registers of various languages (Zafiu 2008; Hancock 2012; Stover 2016; Borreguero Zuloaga 2018, etc.). Such studies, in the fields of (historical) pragmatics and discourse analysis and language acquisition and language pedagogy, attempted to explain the development of DMs, which is generally understood to be a consequence of lexicalization (Fischer 2007a; 2007b, etc.), grammaticalization (Traugott 1995; Brinton 2000; Brinton 2017), and pragmaticalization (Claridge and Arnovick 2010). Most recently, DMs were described as grammaticalized parentheticals (Heine et al. 2019), an interpretation which, I would argue, is very close to that of pragmaticalization.

This paper will provide a brief theoretical overview of the processes of grammaticalization, pragmaticalization, and interpretations of DMs in literature, attempting to discuss pragmaticalization as a process separate from that of grammaticalization. The selected data will provide arguments in support of this approach, aiming to tackle the following questions: (a) To what point in the evolution of these adverbs can we speak of grammaticalization and when does the process of pragmaticalization take over, or could we speak of pragmaticalized lexical units without grammaticalization having occurred previously? (b) What are the pragmatic functions of the markers *atunci* and *apoi* and the meanings underlying these functions in contemporary spoken Romanian?

Keywords: discourse markers, pragmaticalization, grammaticalization, temporal adverbs, Romanian atunci, Romanian apoi, desemanticization

[Abstract word count: 350]

References

Borreguero Zuloaga, M. (2018). The evolution of temporal adverbs into consecutive connectives and the role of discourse traditions: the case of It. allora and Sp. entonces. In Borderia and Lamas (eds.), pp. 231-270.

Brinton, L. (2017). The Evolution of Pragmatic Markers in English: Pathways of Change. Cambridge: Cambridge University Press. doi:10.1017/9781316416013, pp. 1-38.

Brinton, L. (2010). Discourse markers. In Bublitz, Jucker, Schneider (eds.), pp. 285-314. Claridge, C., Arnovick, L. (2010). Pragmaticalisation and discursisation. In Bublitz, Jucker, Schneider (eds.), pp. 165-192.

Fischer, Olga. 2007a. *Morphosyntactic Change*. Oxford: Oxford University Press.

Fischer, Olga. 2007b. The development of English parentheticals: A case of grammaticalization? In *Tracing English through Time: Explorations in Language Variation: A Festschrift for Herbert Schendl on the Occasion of his 65th Birthday*, Ute Smit et al. (eds), 103 – 118. Vienna : Braumüller.

GALR. Academia Română, Institutul de Lingvistică „Iorgu Iordan – Al. Rosetti", Valeria Guţu-Romalo (coord.), 2008, Gramatica limbii române, vol. I, II, Bucureşti, Editura Academiei Române.

Hancock, Victorine. (2014). Pragmatic use of temporal adverbs in L1 and L2 French. In Language, Interaction and Acquisition, Volume 3, Issue 1, Jan 2012, pp. 29 – 51.

Heine, B. & Kaltenböck, G. & Kuteva, T. (2019). On the rise of discourse markers.

Traugott, E. (2010). Grammaticalization. In Bublitz, Jucker, Schneider (eds.), pp. 97-126.

Traugott, E. (1995). The role of the development of discourse markers in a theory of grammaticalization.

Stover, L.M. (2016). Consecutive connectors: A study on discourse markers in Honduran Speech.

Zafiu, R. (2008). Gramaticalizare și pragmaticalizare.

Zafiu, R. (2009). Evoluţia adverbelor de timp atunci, acum, apoi către statutul de mărci discursive. In *Rodica Zafiu, Gabriela Stoica, Mihaela N. Constantinescu (eds.), Limba română. Teme actuale. Actele celui de-al 8-lea Colocviu al Catedrei de limba română*, Bucureşti, Editura Universităţii din Bucureşti, pp. 779-793.

Online Modality Influencing Acceptability Judgements in Spanish Passives

Research pushing for more formal experimental methods in syntax argues online platforms such as Amazon Mechanical Turk (MTurk) offer an easy way to conduct experimental research in syntax (Sprouse et al., 2013). Indeed, comparisons between formal and informal syntactic experiments show little difference in results when run online (Sprouse, 2011; Sprouse et al., 2013). However, it is unclear if the online replications' results are specific to syntactic phenomena, since only those were compared. Particularly syntax-semantics phenomena could be more costly to process (Pylkkänen & McElree, 2006). This might affect results in an online setting such as MTurk, since 25% of workers on MTurk use it as their main source of income (Smith, 2016). Thus, completing tasks efficiently is vital.

In Spanish, the grammaticality of the *by-phrase* differs between verbal and adjectival passives due to a syntax-semantics process (Gehrke, 2015). The grammaticality of the *by-phrase* depends on matching the event-type with the auxiliary and aspect. Verbal passives – denoting an event – take *ser* and preterit. They can optionally host a *by-phrase*. Adjectival passives – denoting a state – take *estar* and imperfect. They cannot host a *by-phrase* (except with a subset of possible subjects) (Valenzuela et al., 2015; Gehrke, 2015; Alexiadou et al., 2014; Gehrke & Marco, 2014)

1a) Todos los cuadros fueron pintados (por el niño rubio). [Verbal]

all the paintings is.SER.PRET.3P painted (by the boy blond)

'All the paintings were painted by the blond boy.'

1b) *Todos los cuadros estaban pintados (*por el niño rubio). [Adjectival]

all the paintings is.ESTAR.IMPERF.3P painted by the boy blond

'All the paintings were painted by the (blond) boy.'

This study ran a partial replication of Valenzuela et al., (2015)'s offline study to see whether there were any differences in the online results when investigating an area interfacing with syntax. If informal AJTs would be as accurate as formal AJTs, despite the online nature of the task, we would expect similar results to Valenzuela et al., (2015): Native speakers should perform targetlike and heritage speakers should overaccept adjectival passives with a *by-phrase.*

28 native speakers from Spain and Latin America and 20 US heritage speakers of Spanish were tested, using an AJT. The primary change to Valenzuela et al., (2015) was that participants were recruited on MTurk. Further, since Valenzuela et al., (2014) had no minimal pairs between adjectival and verbal passives, nor between present, imperfect, and preterit tense, minimal pairs were created for these using items from Valenzuela et al., (2014).

The results showed both groups overaccepted adjectival passives with a *by-phrase* (Figure 1). However, statistical analysis revealed the native speakers rated adjectival passives with a *by-phrase* as significantly worse than adjectival passives without a *by-phrase*. Heritage speakers made no such distinction (Figure 2). I take these findings as syntax-semantics phenomena requiring further analysis for comparable results with offline studies, since they result in overacceptance in AJTs. This analysis does require further verification from more online studies with other syntax-semantics interface phenomena though.

(495 words)

S

Figures

(1)

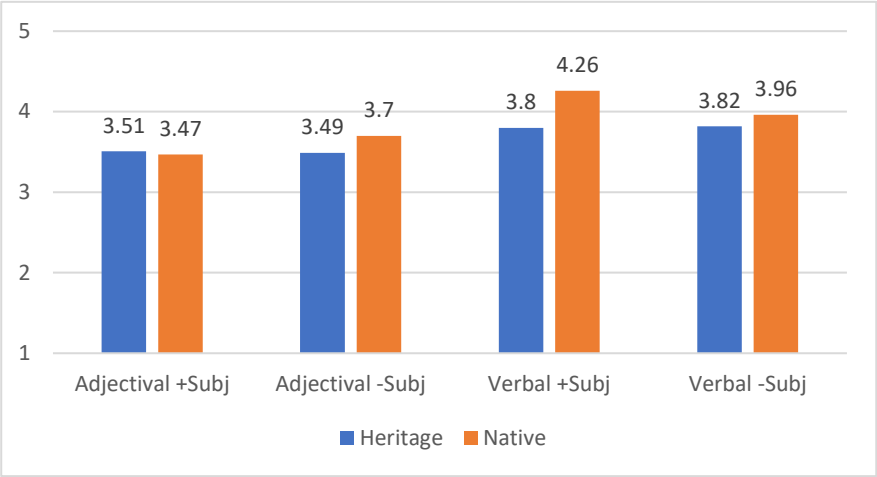

Figure 1. Mean Ratings per Passive per Group.

Note: Ratings 1-2 = unacceptable, 3-5 = acceptable. + Subj = with *by-phrase*; -Sub = no *by-phrase*

(2)

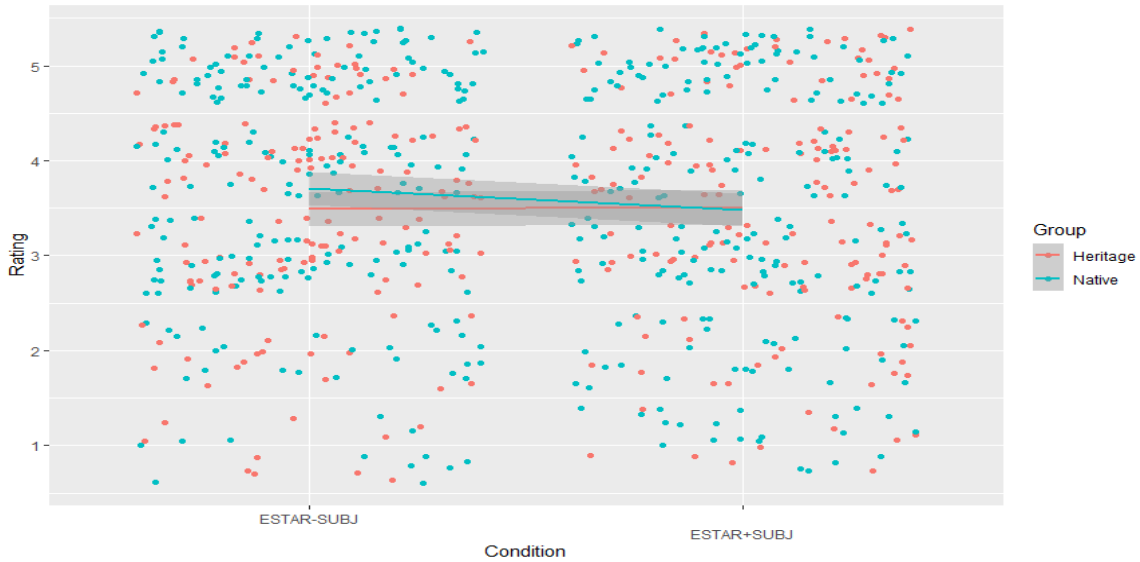

Figure 2. Ratings and Rating trend for Adjectival passives with and without a *by-phrase* per Group

References

Alexiadou, A., Gehrke, B., & Schäfer, F. (2014). The properties of anticausatives cross-linguistically. Studies in *Generative Grammar 91*. pp. 187-211. • Gehrke, B. (2015). Adjectival Participles, event kind modification and pseudo-incorporation. *NLLT 33*, pp. 897-938. • Gehrke, B., & Marco, C. (2014). Different by-phrases with adjectival and verbal passives: Evidence from Spanish corpus data. *Lingua 149*, pp. 188-214. • Sprouse, J. (2011). A validation of Amazon Mechanical Turk for the collection of acceptability judgments in linguistic theory. *Behavior research methods, 43*(1), 155–167. • Sprouse, J., Schütze, C. T., & Almeida, D. (2013). A comparison of informal and formal acceptability judgments using a random sample from Linguistic Inquiry 2001-2010. *Lingua, 134*, 219-248. • Smith, A. (2016). Gig Work, Online Selling and Home Sharing. *Pew Research Center*. • Valenzuela, E., Iverson, M., Rothman, J., Borg, K., Pascual y Cabo, D. and Pinto, M. (2015). Eventive and stative passives and copula selection in Canadian and American Heritage Speaker Spanish. In: *New Perspectives on the Study of Ser and Estar*, pp.267-292.

Opaque OCPs in Longkou Disyllabic Tone Sandhi

Phonological opacity has long been a challenge to Optimality Theory (Prince and Smolensky 1993/2004), and different theoretical devices have been proposed to tackle the problem (Kiparsky 2000, Łubowicz 2003, McCarthy 2003, among others). Based on the opacity in Longkou disyllabic tone sandhi, this study argues for the comparative markedness approach.

Longkou, a Shandong dialect, has four lexical tones: a high register falling tone, HM, a low register falling tone, ML, a low register rising tone, LM, and a high register high-level tone, H, as shown in the leftmost column in (1). Their tone values are indicated within the parentheses.

Among all the di-tonal sequences, five of them undergo tone sandhi. The combinations without tone sandhi are indicated by the shaded cells. For instance, the non-final HM tone changes to H when followed by ML, as in (1c). It does not undergo tone sandhi before another HM, as in (1a).

(1) Disyllabic tone sandhi in Longkou

Final / Non-final	HM	ML	LM	H
HM (53)	a. HM.HM	c. H.ML	HM.LM	HM.H
ML (31)	b. ML.HM	d. H.ML	f. ML.LM	ML.H
LM (13)	LM.HM	e. H.ML	g. H.LM	LM.H
H (55)	H.HM	H.ML	H.LM	h. HM.H

The tone sandhi in (1d,e,g) suggests there is an OCP against adjacent low register tones (OCP-LR), since the non-final low register tones all raise their registers before another low register tone. The tone sandhi in (1c,d) suggests there is an OCP against adjacent falling tones (OCP-FALL), since the non-final falling tones all become level tones before another falling tone. The tone sandhi in (1h) suggests there is an OCP against adjacent H tones, which is avoided by change of contour.

The first two OCPs, however, are rendered opaque by patterns (1a,b,f). In (1a,b), adjacent falling tones are allowed. In (1f), adjacent low register tones are allowed. First, in OT, the underapplication of OCPs in (1b,f) is explained by the faithfulness to ML tone, IDENT-ML, which is ranked above OCP-FALL and OCP-LR. Yet, pattern (1d) still undergoes tone sandhi because of another OCP that forbids adjacent ML tones (OCP-ML). Hence, patterns (1b-g) can be by the ranking, OCP-ML >> IDENT-ML >> OCP-FALL, OCP-LR (faithfulness constraints are omitted for lack of space).

Second, for (1c,d) to undergo contour change, OCP-FALL must dominate IDENT-CONTOUR, which forbids any change in the contour. For (1a) to remain unchanged, OCP-FALL must be overridden by some constraint. Thus, a conjunction constraint, [OCP-HR & OCP-*h*], which bans both adjacent high register tones and *h*-melodies in a disyllabic sequence, is proposed to eliminate structures such as (2b).

(2) /HM.HM/→[HM.HM]

/HM.HM/	[OCP-HR & OCP-*h*]	OCP-FALL	IDENT-CONT
→a. HM.HM		*	
b. H.HM	*! [HR, **h**][HR, **h**l]		*

But this constraint must be separated into (3-4), for a distinction must be made between (2b), which is forbidden, and (5a), which is allowed, despite both candidates being [H.HM].

(3) $_{N}$[OCP-HR & OCP-*h*]
Assign one violation mark for every pair of tones with both adjacent high registers and *h*-melodies **which also exist in the input**.

(4) $_{O}$[OCP-HR & OCP-*h*]
Assign one violation mark for every pair of tones with both adjacent high registers and *h*-melodies **which do not exist in the input**.

(5) /H.HM/→[H.HM]

/H.HM/	$_{N}$[OCP-HR & OCP-*h*]	OCP-FALL	IDENT-CONT	$_{O}$[OCP-HR & OCP-*h*]
→a. H.HM				* [HR, **h**][HR, **h**l]
b. LM.HM			*!	

It follows that Longkou exhibits a grandfather effect which distinguishes between a derived sequence with both adjacent high registers and *h*-melodies, which violates (2), and a non-derived one, which violates (3). By ranking (2) above OCP-FALL, and (3) below IDENT-CONTOUR, the new violation in (2b) is forbidden, while allowing the old violation in (5a).

Word count: 431

References

Kiparsky, Paul. 2000. Opacity and cyclicity. *The Linguistic Review* 17: 351-367.

Łubowicz, Anna. 2003. Local conjunction and comparative markedness. *Theoretical linguistics* 29: 101-112.

McCarthy, John J. 2003. Comparative markedness. *Theoretical Linguistics 29*: 1-51.

Prince, Alan, & Paul Smolensky. 1993. *Optimality Theory: constraint interaction in generative grammar*. Ms. Rutgers University & University of Colorado, Boulder. Published 2004, Malden, Mass. & Oxford: Blackwell.

Pedagogy to Overcome Interlanguage Fossilization: Rethinking and Revising Mehmet Demirezen's (2010) Audio-articulation Method

Abstract

Since the phenomenon of fossilization has introduced to the field of Second Language Acquisition (SLA), researchers have inclined much attention to the process of fossilization (Selinker, 1972; Han, 2004), types of fossilization (Rahal, 2016; Wei, 2008) and solutions to overcome this linguistic obstacle (Zheng, 2010; Valette, 1991). This linguistic phenomenon is defined as "the permanent cessation of IL learning before the learner has attained target language norms at all levels of linguistic structure and in all discourse domains in spite of the learner's positive ability, opportunity or motivation to learn or acculturate into target society" (Selinker and Lamendella, 1979). Mehmet Demirezen (2010) suggested the audio-articulation method to avoid phonetic fossilization which refers to the acquisition of incorrect pronunication. This method is based on the audio-lingual principles, including drills, repetition, etc. and it leans on the Presentation, Practice, Production (PPP) approach. This presentation is an attempt to rethink and revise the audio-articulation method and include new activities to this method from the principles of the communicative language teaching approach. Theoretically, it will start by presenting the concept of 'interlanguage (IL) fossilization', phonetic fossilization and previous studies on phonetic fossilization and the suggested methods to remedy this linguistic phenomenon. Then, it will introduce the audio-articulation method and a new version of this method by including new activities based on the communicative approach. Pedagogically, the insights derived from this study can contribute to the development of the theory of applied linguistics, namely the IL theory and fossilization. It can also give insights into the different pedagogical ways that should be used to avoid stabilized errors in learners' IL.

***Keywords*:** Interlanguage fossilization, audio-articulation method, communicative approach.

References

Demirezen, M. (2010). The principles and application of the audio-lingual pronunciation rehabilitation model in foreign language teacher education. *Journal of Language and Linguistic Studies*, *6*(2), 127-147.

Han, Z. (2004). What is fossilization? *Fossilization in Adult Second Language Acquisition* (pp.12-23). Toronto: Multilingual Matters.

Rahal, A. (2016). *Phonetic Fossilization in the speech of advanced Tunisian English students: The English department of kairouan as a case study*. Unpublished MA thesis. Faculty of Letters and Humanities of Kairouan.

Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics*, *10*, 203-230.

Selinker, L. & Lamendella, J. (1979). The role of extrinsic feedback in interlanguage fossilization: A discussion of 'Rule fossilization: A tentative model.' *Language Learning*, *29* (2), 363-375.

Valette, R.M. (1991). Proficiency and the prevention of fossilization. *The Modern Language Journal*, *75*, 325-328.

Wei, X. (2008). Implication of IL fossilization in second language acquisition. *English Language Teaching*, *1*(1), 127-131.

Zheng, Y. (2010). On some models of instruction for overcoming fossilization in English learning. *Journal of Language Teaching and Research*, *1*(2), 148-150.

Perceptual Advantages of Foreign Directed Speech

Foreign directed speech (FDS) is a listener directed speech style used when native speakers interact with non-native listeners of a language. Current phonetic literature defines the acoustic properties of FDS, but does not address its advantageousness or non-native listener perception. This study investigates if listeners, native or non-native, benefit from the phonetic features of FDS in English.

Listener-directed speech styles operate on a continuum of phonetic variation between speaking clearly and speaking easily, i.e. Lindblom's H&H theory. The higher the constraint is for listener demands, the more hyperarticulated speech will be in production. Picheny et al. show that such modifications in clear speech are beneficial, resulting in more accurate repetitions of audio when listeners received clear speech. FDS is a type of clear speech with similar intelligibility considerations and phonetic features, used when speakers perceive comprehension difficulty for non-native listeners. As with other types of clear speech, speakers accommodate for perceived listener needs in comprehension by producing phonetic features, such as expanded vowel space size, slower speech rate, and longer vowel duration.

The current study explores native and non-native listener perception with FDS. 24 native English speakers and 19 non-native speakers were recruited on Amazon Mechanical Turk from a variety of language backgrounds, e.g. Chinese, Italian, Tamil. These participants were presented with a series of short audio clips and two pictures. They were asked to click on the correct image based on the audio given with reaction times recorded. The audio was taken from an interactive map task (Scarborough et al. 2007) in which 10 participants described, to either a native listener or non-native listener, a route on a map with 12 unique landmarks, such as "poisoned stream" or "remote village". These 12 landmarks were isolated and presented as stimuli in the current study. Each participant was given a randomized order of 24 speech tokens: 12 tokens from each of the two speech conditions, native speech (NS) and FDS.

Participants with accuracy below 75% were removed (5 native listeners, 3 non-native listeners), leaving 35 participants for analysis. Accuracy among the remaining data was similar across listener groups but higher for FDS (mean = 1.15s) than for NS (mean = 1.32s). Analysis of reaction times was based only on correct responses. The data showed that the speech condition received had a significant effect on reaction time, where FDS yielded faster reaction times than native speech (est = -0.024, $t = 2.035$, $p = 0.04$). Interestingly, listener language background did not have a significant effect, with both groups performing similarly in reaction times across both speech conditions (est = 0.055, $t = 1.21$, $p = 0.23$).

The results of this study indicate that the phonetic characteristics of FDS are beneficial for comprehension when compared to native, casual speech regardless of listener language backgrounds; both native and non-native listeners are able to utilize these speech modifications to better facilitate comprehension. This may be because the phonetic characteristics of FDS are similar to the characteristics of other types of clear speech.

Word Count = 500

Pitch-Accent in Hidatsa

The role that pitch (F0) plays in Hidatsa, a Siouan language spoken on the Fort Berthold reservation, North Dakota, has been analyzed by various researchers as syntactic (Bowers 1996), lexical (Park 2012), non-existent (Boyle et al. 2016), and phonological (Rivera 2017).

In this paper, I investigate the phonological role that pitch plays in Hidatsa and specifically investigate Rivera 2017's claim that contrastive pitch in Hidatsa can be accounted for with pitch tunes (*H*L*, *HL**, *L*H*, and Final Mora) aligning to quantity sensitive iambs, as well as Park 2012's claim that pitch spreads right from the left edge of words.

While Rivera's analysis of pitch tunes can account for the distribution of pitch in Hidatsa words, her reporting of number of tokens and distribution of tunes is inconsistent throughout her work.

Due to these inconsistencies in Rivera's collection and reporting of her data, I have replicated her study by comparing the F0 of the syllable with the highest pitch of each word to the surrounding syllables and find that there is a significant difference in pitch ($p < 0.001$, $n = 100$) contra Boyle et al. 2016. This difference in pitch holds true when comparing the highest frequency syllable to preceding syllables ($p < 0.001$, $n = 61$) ruling out Park 2012's claim of rightword pitch spread. Since I only investigated word level prosody, I make no claims regarding the validity of Bowers 1996's analysis of syntactic pitch assignment.

I further find that Rivera's proposed pitch tunes do account for all the data in the study, though not in the proportions she reports.

This recreation of Rivera' initial study sheds light on the role pitch plays in Hidatsa prosody and can be the groundwork for further investigation into intonation in Hidatsa. While the results reported here are statistically significant, the question of salience to speakers is left unanswered and further studies should focus on listeners' perception of pitch in speech.

Word Count: 421

References

BOWERS, NORMAN. 1996. *Hidatsa suprasegmentas: A phonological analysis of a Siouan native North American language.* Ph.D. Diss., The University of Idaho. Moscow, ID.

BOYLE, JOHN P., RYAN KASAK, SARAH LUNDQUIST, ARMIK MIRZAYAN, JONIA TORRES and BRITTANY WILLIAMS. 2016. *A Preliminary Study on Accentuation in Hidatsa.* Paper presented at the annual meeting of the Society for the Studies of Indigenous Languages of the Americas at the Linguistic Society of America annual meeting, Washington, D.C.

PARK, INDREK. 2012. *A Grammar of Hidatsa.* Ph.D. dissertation. Indiana University. Bloomington, ID.

RIVERA, AMANDA. 2017. *Metrical Prominence in Hidatsa: An Acoustic and Phonological Analysis.* M.A. Thesis. California State University, Fresno. Fresno, CA.