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OCP20 – The 20th Old World Conference on Phonology

Invited speakers

Hannah Sande | UC Berkeley

Noam Faust | Université Paris 8

Sabine Arndt-Lappe | Universität Trier

Old World Conference of Phonology – OCP 20

Université de Tours (France) January 25th-27th, 2023

Program

Wednesday January 25th, 2023

	Speaker(s)	Title
9:30	Welcome/Opening remarks	
10:00	Invited talk: Hannah Sande (Berkeley)	<i>Discontinuous harmony is movement after local phonology</i>
11:00	Coffee break	
11:30	Posters	
	Kappa Ioanna & Katerina Ilioupoulou (Crete)	<i>Child speech vs aphasic speech: heterogeneously motivated homogeneous Consonant Harmony patterns</i>
	Wang Yuxuan (Harvard)	<i>Experimentally comparing the learnability of transparent and opaque rule interactions</i>
	Jesús Jiménez (Valencia) & Maria-Rosa Lloret (Barcelona)	<i>Explaining deviations from sonority preferences in the distribution of rhotics in Catalan</i>
	Nikolay Hakimov (Bamberg)	<i>Preliterate children's intuitions shed light on the variable syllable structure in Russian</i>
	Stephanie Kauccke & Marcel Schlechtweg (Oldenburg)	<i>Learning a non-native vowel contrast with vowel harmony in clear speech and in noise</i>
13:00	Lunch break	
15:00	Madeleine Gilbert (Sorbonne Nouvelle)	<i>The role of perceptual factors in laryngeal metathesis</i>
15:30	Julian Bradfield (Edinburgh) & Shanti Ulfsbjorninn (Memorial U.)	<i>Mirage of Gradience in !Xóõ Vowel Raising</i>
16:00	Coffee break	
16:45	Alireza Jaferian (Tours & SFL Paris 8)	<i>Consonant-clusters and the Word-initial position in Farsi</i>
17:15	Armel Jolin (Leipzig)	<i>A non-polar, concatenative account of Kipsigis across-the-board tonal polarity</i>
17:45	Guillaume Enguehard (Orléans)	<i>The erosion of the end of the word</i>
18:15	End of day 1	

Thursday January 26th, 2023

	Speaker(s)	Title
9:00	Birgit Alber (Bozen) & Eirini Apostolopoulou (Bozen)	<i>Language change as minimal change of property values.</i>
9:30	Geoffrey Schwartz & Ewelina Wojtkowiak (Poznań)	<i>Cross-language prosodic differences in onset clusters – acoustic evidence from Polish-English bilinguals</i>
10:00	Quentin Dabouis (Clermont Ferrand)	<i>Opaque yet still complex: Proper names in English</i>
10:30	Coffee break	
11:15	Claudia Parfene (Leipzig) & Shanti Ulfsbjorninn (Memorial U.)	<i>On the Shape of Roots in Romanian: Deriving the Nominal Inflectional Classes</i>
11:45	Maude Bouvier (UQAM)	<i>Double allomorphy in Korean nominative pronouns? Additional evidence from demonstrative and interrogative proforms for a floating segment analysis and derivation by phase.</i>
12:15	Lunch break	
14:00	Invited talk: Sabine Arndt-Lappe (Trier)	Have a little FAITH? Stress alternations, variability, and meaning
15:00	Posters	
	Karolina Broś (Warsaw) & Peter Krause (Santa Cruz)	<i>Stop lenition in Canary Islands Spanish – a motion capture study</i>
	Liu Haiyang (Lisbon)	<i>Violable cyclic construction of syntactic of post-syntactic linearization at PF & cyclicity of postlexical phonology</i>
	Veronica Miatto (Stony Brook)	<i>Word-final schwas in Italian are non-syllabic vocoids</i>
	Markus Pöchtrager (Vienna)	<i>Yoruba vowels and the representation of openness</i>
16:00	Coffee break	
16:30	Benjamin Storme (Leiden)	<i>The best of both worlds: variation and global evaluation in constraint-based grammars.</i>
17:00	Razieh Shojaei (Leipzig)	<i>A Gradient Harmonic Grammar account of Choguita Raramuri stress-accent</i>
17:30	Sabrina Bendjaballah (LLING CNRS) & David Le Gac (Rouen)	<i>On Somali geminates: Phonetics, Phonology and Diatopic variation.</i>
18:00	Clément Michard (Bern)	<i>Selection of the epenthetic 'l' in French with travlo words</i>
18:30	End of day 2	

Friday January 27th, 2023

		Title
9:00	Sören Tebay (Leipzig)	<i>Parallel interaction between infixation and root domain constraints</i>
9:30	N. Lampitelli (Paris Nanterre), A. Briglia, E. Bronner-Huard & Ch. Dos Santos (Tours)	<i>Compensatory lengthening in French language acquisition: Evidence from a nonword repetition task.</i>
10:00	Andrew Nevins (UCL) & Damulakis Gean (UFRJ)	<i>Acoustic for nouns, orthography for verbs: differential loanword adaptation and defectivity.</i>
10:30	Coffee break	
11:15	Chris Golston & Christian Paulsen (Fresno)	<i>Ancient Greek Accentual Classes</i>
11:45	Invited talk 3: Noam Faust (Paris 8)	<i>Metrical weight as incorporation in Strict CV metrics</i>
12:45	Farewell/Closing remarks	
13:15	End of day 3/End of OCP20	

Venue:

The conference will take place at the following address: 3, rue des Tanneurs 37000 Tours (the building is known as “Les Tanneurs”, you cannot miss it).

Oral talks will be in Room 70 (ground floor): follow the signs from the building’s main entrance.

Posters and coffee breaks will be in the library (5th floor, take the lift): follow the signs from Room 70 and/or ask the organizers.

Welcome desk will be right in front of Room 70.

Organizing Committee:

Véronique Abasq, Guillaume Enguehard, Jean-Michel Fournier, Nicola Lampitelli, Mohamed Lahrouchi, Marjolaine Martin, Stéfany Thierry

Institutional partners:



**Compensatory lengthening in French language acquisition:
Evidence from a nonword repetition task**

Nicola Lampitelli¹, Émeline Bronner-Huard², Andrea Briglia² & Christophe dos Santos²

¹MoDyCo UMR 7114 CNRS & Université Paris Nanterre

²UMR 1253, iBrain, Université de Tours, Inserm, Tours, France

The issue. This paper investigates compensatory lengthening (CL) occurrences in the production of 59 French children, aged 4 and half years old on average during the first session and 6 and half years old on average during the second session. They have been tested through a nonword repetition task known as LITMUS-QU-NWR-FRENCH (LQNF, dos Santos & Ferré 2016, dos Santos et al. 2020). CL consists of replacing the loss of a segment through lengthening of another segment (Gess 2011). One of the most common cases of CL involves the loss of a coda (C in 1) followed by lengthening of the preceding vowel:

(1) (C)VC.CV → (C)V:CV [C stands for consonant and V for vowel.]

Analyses of CL (Hayes 1989, Ingria 1980 a.o.) have generally postulated a requirement imposing the parsing of the mora originally associated with the lost coda: thus, lengthening the vowel preceding the dropped consonant has the immediate effect of realizing that underlying mora. This approach assumes that i. languages displaying CL must be moraic, and ii. morae cannot remain unparsed (in synchronic terms). It is generally claimed that mora is irrelevant in French (Dell 1995 a.o., but see Féry 2003); consequently, we should expect CL not to be occurring in this language. Rather, our data supports the hypothesis that words realize an underlying sequence of strict alternation of Cs and Vs (Lowenstamm 1996, Scheer 2004). We argue that CL results from a CV unit in the template associated with each nonword.

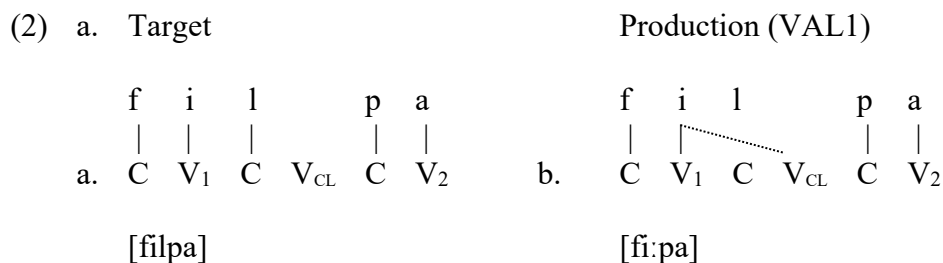
Children and data. The 59 children have been recruited in 2018-2019 in Tours (France), for none of them parents reported any kind of pathology (including speech pathologies). Each child was tested twice: first, in *moyenne section* (MS, roughly equivalent to Preschool in the US) then later in *cours préparatoire* (CP, roughly equivalent to 1st grade) (Plasse 2021, Bellakhal 2021). LQNF consists of some items fitting this specific template (CV.)CV(C).CV where codas are limited to /l/ or /s/ (see dos Santos & Ferré 2016). Overall, seven such items with internal coda (IC) exist in the corpus: [kupalfi], [kufalpi], [fikuspa], [pafuski], [kuspa], [filpa], [pilfu], and seven without IC: [kifapu], [pufaki], [piklafu], [kuflapi], [fupli], [paklu], [plifu]. Each session was first recorded, then transcribed with Phon (Hedlund & Rose 2022); later we segmented vowels and consonants manually using Praat (Boersma & Weening, 2022) available directly through Phon.

Methodology. The production of the target items with IC was grouped into two categories, those whose IC was produced, and those whose IC was not produced by the children. For each of these productions, vowel length was obtained. The table below presents the data analyzed to date, i.e. the average vowel length for each item according to the presence or absence of IC in production in MS and CP. Whatever the item, the average vowel length is systematically longer if the item is produced without internal coda. For comparison purposes, the vowel length of the seven target-items without IC is given.

NW (target)			Vowel length in s. (σ)	
			Produced with IC	Produced without IC
with IC	MS	n=391	n=336 0.116 (.052)	n=55 0.162 (.058)
	CP	n=398	n=391 0.093 (.028)	n=7 0.164 (.053)
without IC	MS	n=403	NA	n=403 0.138 (.057)
	CP	n=405	NA	n=405 0.109 (.032)

Results. As our data do not follow normal distribution, we used a non-parametric statistical test. The duration of the vowel in MS is statistically longer when the target NW with IC is produced without IC ($U(391) = 14093.000$; $p < .001$). The same statistical difference is found in CP ($U(398) = 2495.000$; $p < .001$). Our data shows therefore that the vowel is clearly lengthened when the IC of a target NW with an IC is not produced in MS or in CP.

Discussion. Differing from Almeida (2008) who assumes that Portuguese/French bilingual children employ CL as a repair strategy to realize an underlying mora, then discharge it from their representation when the acquisition process is over, we hypothesize that children compute first the prosodic template of (non)words, namely $(CV.)CV_1(.CV_{CL}).CV_2$, then they realize each CV unit. The CV_{CL} refers to the site of realization codas /l/ and /s/. In case the child does not produce codas yet, the repair strategy consists of spreading the vowel associated to CV_1 onto CV_{CL} . In other words, CL emerges from the underlying sequence of prosodic positions, and this is orthogonal to the purported moraicity of French. In (2a), we show the representation of target form [filpa] and the form [fi:pa] produced by VAL1, one of the children in MS (2b). The duration of the lengthened vowel is 0.184 s.



In conclusion, robust statistical evidence militates in favor of vowel lengthening as a repair strategy when codas are omitted. Strict CV naturally accounts for CL with no need to assume morae in a non-moraic language like French.

References. Almeida, L. 2008. Compensatory Lengthening in Bilingual Acquisition of Languages Insensitive to Syllable Weight. A. Gavarró & M. J. Freitas (eds) *Proceeding of GALA 2007*. Newcastle: Cambridge Scholars, 30-40. Bellakhal, S. 2021. Prédire les performances en orthographe dès la maternelle, pertinence de l'épreuve LITMUS-NWR-QU-FR. MA Thesis, U. Tours. Boersma, P. & D. Weening. 2022. Praat: doing phonetics by computer version 6.2.06 [Computer Software]. Retrieved from <https://www.praat.org>. Dell, F. 1995. Consonant Clusters and Phonological Syllables in French. *Lingua* 95. 5-26. Féry, C. 2003. Markedness, Faithfulness, Vowel Quality and Syllable Structure in French. *Journal of French Studies* 13. 247-280. Gess, R. 2011. Compensatory Lengthening. M. van Oostendorp et al. *Wiley-Blackwell Companion to Phonology*. Oxford: Blackwell, 1513-1536. Hayes, B. 1989. Compensatory Lengthening in Moraic phonology. *Linguistic Inquiry* 20, 235-306. Hedlund, G. & Y. Rose. 2022. Phon 3.4.2 [Computer Software]. Retrieved from <https://phon.ca>. Ingria, R. 1980. Compensatory Lengthening as a metrical phenomenon. *Linguistic Inquiry* 11, 465-495. Lowenstamm, J. 1996. CV as the Only Syllable Type. *Current Trends in Phonology Models and Methods*, ed. by J. Durand & B. Laks, ESRI, Salford. 419-442. Plasse, C. 2021. *Liens entre représentations phonologiques en maternelle et apprentissage de la lecture : une étude longitudinale*. MA Thesis, U. Tours. dos Santos, C. & S. Ferré 2016. A Nonword Repetition Task to Access Bilingual Children's Phonology. *Language Acquisition*, 1-14. dos Santos, C., Frau, S., Labrevoit, S., & Zebib, R. 2020. L'épreuve de répétition de non-mots LITMUS-NWR-FR évalue-t-elle la phonologie ? *SHS Web of Conferences* (Vol. 78, p. 10005). EDP Sciences. Scheer, T. 2004. *A Lateral Theory of Phonology. Vol 1: What is CVCV, and Why Should it Be?* Berlin: Mouton.