

Day 3: “Phonological decomposition of inflectional markers”

Case study 1: The Italian definite article

(This work has been published as N. Faust, N. Lampitelli and Ulfsgjorninn, S. 2018 Articles of Italian Unite! Italian definite articles without allomorphy. Canadian Journal of Linguistics, pp. 1-28.)

1. The Italian definite article: a well-known case of allomorphy

(1) Basic facts

	singular	plural		Environment								
a.	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>i</td><td>l</td></tr><tr><td>l</td><td>o</td></tr></table> sakko	i	l	l	o	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>λ</td><td>i</td></tr><tr><td>s</td><td>k</td></tr></table> sakki	λ	i	s	k	‘the bag’	__ CV
i	l											
l	o											
λ	i											
s	k											
	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>l</td><td>o</td></tr></table> ska:fo	l	o	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>λ</td><td>i</td></tr><tr><td>s</td><td>k</td></tr></table> ska:fi	λ	i	s	k	‘the hull’	__ CCV		
l	o											
λ	i											
s	k											
b.	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>l</td><td>a</td></tr><tr><td>l</td><td>a</td></tr></table> rɔ:za	l	a	l	a	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>l</td><td>e</td></tr><tr><td>l</td><td>e</td></tr></table> rɔ:ze	l	e	l	e	‘the rose’	__ CV
l	a											
l	a											
l	e											
l	e											
	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>l</td><td>a</td></tr><tr><td>l</td><td>a</td></tr></table> skatola	l	a	l	a	<table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>l</td><td>e</td></tr><tr><td>l</td><td>e</td></tr></table> skatole	l	e	l	e	‘the box’	__ CCV
l	a											
l	a											
l	e											
l	e											

(2) Phonologically-conditioned allomorphy:

a. singular

/def, sg/ → [lo] / __C₁C₂ (except when C₂=liquid)
→ [il] / elsewhere

[l] is stable
[o]~∅ alternation
[i]~∅ alternation

b. plural

/def, pl/ → [λi] / __C₁C₂ (except when C₂=liquid)
→ [i] / elsewhere

[i] is stable
[λ]~∅ alternation

- Allomorphs are too similar to posit two lexical entries;

BUT

- Allomorph selection does not seem to be optimizing.

- ⇒ Why is [il] preferred in the singular before a consonant, where it introduces a coda?
- ⇒ Why is an onsetless syllable [i] preferred in the plural at all?
- ⇒ Why does the allomorph with the onset [λ] co-occur with the coda in the plural?

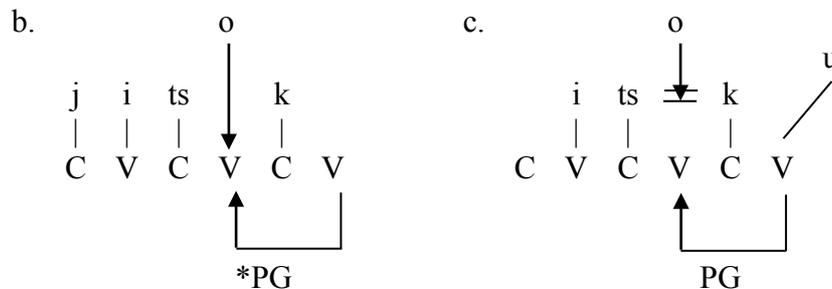
Claim

It is possible to derive **all** realizations from one underlying representation. This is not really allomorphy - two lexically-stored realizations of the same information - but rather just phonology.

- In languages with C-final words, the final empty nucleus is allowed to remain unrealized by a parameter setting.

(7) Vowels that alternates with zero float, and are not realized when governed (Scheer 2004)

a. Hebrew: [jitsok] - [jitsku] ‘he will mold, they will mold’



⇒ If the slot is governed, it won't be realized (the vowel will remain afloat)

⇒ If the slot is ungoverned, it must be realized (the vowel will associate).

3. Allomorphy in the singular definite article: [il] ~ [lo] (and another one)

(8) Data (Nespor 1993: 222 ff)

<p>[il]</p> <p>a. il sakko ‘bag’ il ka:ne ‘dog’ il ba:ʃo ‘kiss’</p> <p>b. il tre:no ‘train’ il kjavistello ‘bolt’</p>	<p>[lo]</p> <p>c. lo ska:fo ‘hull’ lo sta:djo ‘stadium’ lo zbaλλo ‘mistake’</p> <p>d. lo strappo ‘rip’ lo skja:vo ‘slave’</p>	<p>[l]</p> <p>e. l azino ‘donkey’ l eza:me ‘exam’ l inkariko ‘task’ l okkjo ‘eye’ l urto ‘strike’</p>
---	---	---

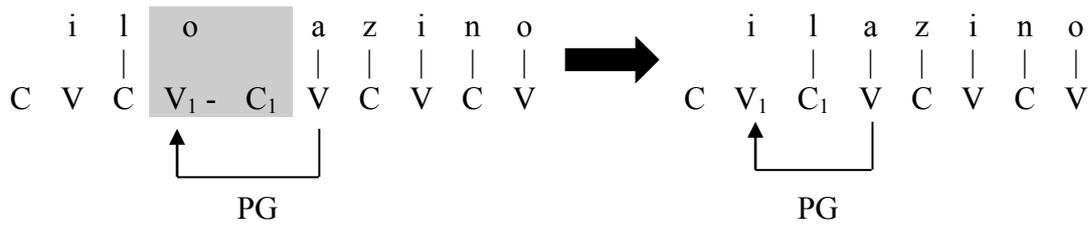
(9) [lo] appears before other cases that require a coda

<p>a. ɲo:mo lo ɲɲo:mo ‘gnome’ ʃa:me lo ʃʃa:me ‘swarm’</p> <p>b. dzɔkkolo lo dzdzokkolo ‘wooden shoe’ ʃa:me lo ʃʃa:me ‘swarm’</p>	<p>c. lo pterodattilo ‘the pterodactyl’ lo psikologo ‘analyst’ lo ksilofono ‘xylophone’ lo khmer ‘Khmer’</p>
--	--

These consonants are inherent geminates: /ɲ, λ, ts, dz, ʃ, (j)/

- Larsen (1998): /ilo/ in both cases.

(15) A sequence of vowels is truncated in favor of the associated vowel: [lazino] ‘the donkey’



4. Allomorphy in the plural definite article

(16) Reminder: data

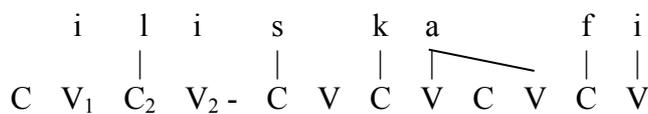
	[i]		[ʎi]		[ʎi]			
a.	i sakki	‘bag’	c.	ʎi ska:fi	‘hulls’	e.	ʎi ɲɲo:mi	‘gnomes’
	i ka:ni	‘dog’		ʎi sta:dji	‘stadiums’		ʎi ʃʃa:mi	‘swarms’
	i ba:ʃi	‘kiss’		ʎi zbaʎʎi	‘mistakes’	f.	ʎi zdɔkkoli	‘wooden shoes’
b.	i tre:ni	‘train’	d.	ʎi strappi	‘scraps’	g.	ʎi pterodattili	‘pterodactyls’
	i kjavistelli	‘bolts’		ʎi skja:vi	‘slaves’		ʎi psikologi	‘analysts’

- To continue the analogy with general \varnothing -makers, the representation of plural involves [-i], where the singular has -o; in other words,

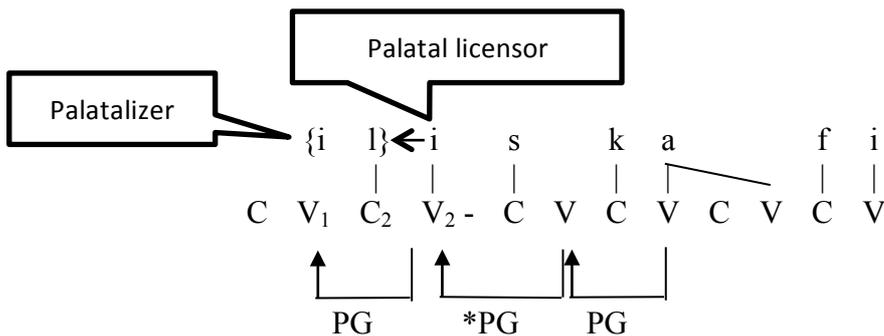
if [il] and [lo] are derived from /il+o_{sg}/,
then
[i] and [ʎi] must be derived from /il+i_{pl}/

(17) Representations of [ʎi ska:fi] ‘the hulls’

a. UR



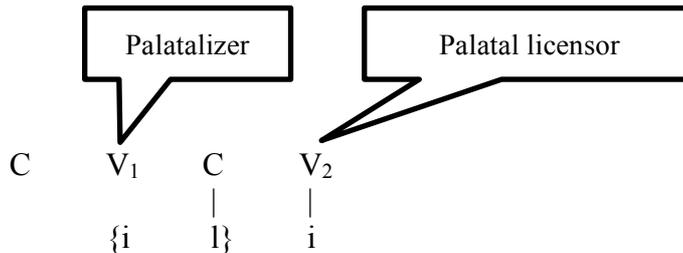
b. Phonology



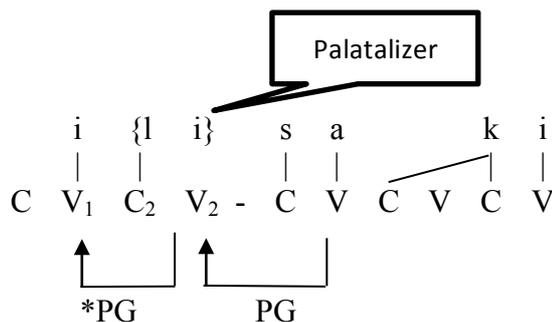
- Palatal [λ] is not a primitive of Italian; its realization requires both a preceding **palatalizer** and a **palatal licenser**.
- The outcome of the derivation has an empty initial CV

(18) Palatal Licensing

{i, l} must be licensed by a nucleus containing only /i/



(19) Representations of [i sakki] ‘the bags’: there is a palatalizer, but no licenser



*[i λ _ sakki] - No coda [λ]

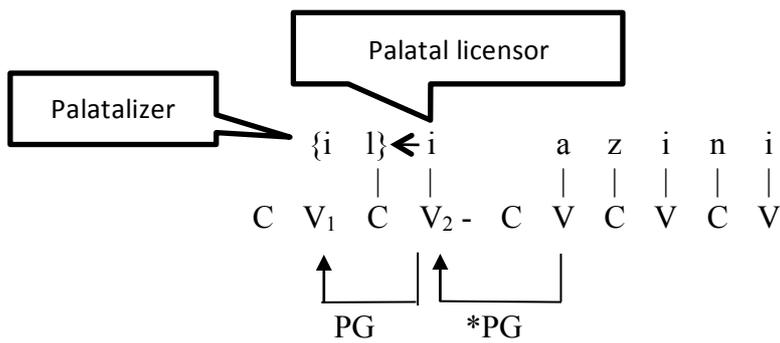
- The palatal structure in C₂ cannot be licensed by V₂, therefore it is not interpreted.²
- In vowel-Initial stems, [λ i] is also used, e.g. [λ i-azini] ‘the donkeys’, *[i-azini].

² Palatalization is an ongoing diachronic process in Standard Italian, some speakers have lexicalized [italia] and [olio] as: [ita λ :a] and [o λ :o]. We note that in these cases gemination always accompanies palatalization, as our structures predict: *[ita λ a].

The absence of visible palatal licenser in the IPA transcription of the outputs has no bearing on its phonological *or even its phonetic* presence. We note that the palatal release inherent of λ (and η , but not of \int or ts for instance) is inbuilt in the IPA symbol. The palatal transition from λ to a following vowel could have been represented as [lj, l^h, jlj] etc... But this does not have a bearing on the phonology of [λ], which always comes with a palatal licenser in Italian, even if this is masked by being released onto a non-palatal vowel: [vo λ λ a] *voglio* ‘will’.

The argument here is identical, for instance, to the burst of the stops. This is also inherently contained in their IPA symbols, and the IPA uses a diacritic to indicate the **absence** of the burst: [p̥]. It could easily have been the other way around, with that all stops marked with a noisy release symbol: [p^o, t^o].

(20) Government is not possible across empty, onsets (Charette 2003, Faust 2014, 2015)



[ʎi azini] ‘the donkeys’

- The alternative, namely truncation as in the singular /ilo azino/ => [lazino], is impossible, since the [i] has to palatal-license the preceding /l/.

5. Beyond the masculine, beyond the article

- The feminine articles does not exhibit any type of allomorphy

(21) Feminine nouns

	sg.		pl.	
a.	la ro:za		le ro:ze	‘rose’
	la pits:a		le pits:e	‘pizza’
b.	la stra:da		le stra:de	‘road’
	la sto:rja		le sto:rje	‘story’

(22) Difference between masculine and feminine: floatingness

i	l	o
C	V C	V -
Def.	φ-feat.	

vs.

i	l	a
C	V C	V -
Def.	φ-feat.	

[lo] ~ [il] ~ [l]

[la] (1st V always governed)

(23) A_{fm}+I_{pl} = feminine plural /-e/. Doesn't trigger palatalization.

i	l	A I
C	V C	V -
Def.	φ-feat.	

(Passino 2009, Lampitelli 2010)

[le] (1st V always governed)

- The pronoun [ʎi] ‘masculine.dative’ (singular or plural)
 - Is homophonous with plural article [ʎi]
 - does not show any allomorphy

- (24) The dative pronouns Italian of
- standard**
- Italian
- ³

ms/fm.sg λ i/le spif:ero 'I whisper to him/her' λ i/le do 'I give to him/her' λ i/le apro 'I open for him/her'*pl*

spif:ero loro 'I whisper to them'

do loro 'I give to them'

apro loro 'I open for them'

Preverbal, unstressed.
Clitics. No plural cliticPostverbal, stressed,
not a clitic.

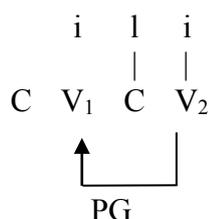
- However, in many varieties of **Spoken** Italian, there *is* a plural clitic: **[λ i] is invariable for any gender/number.**

- (25) Questions

Q1. Given the homophony with plural [λ i], why no allomorphy?

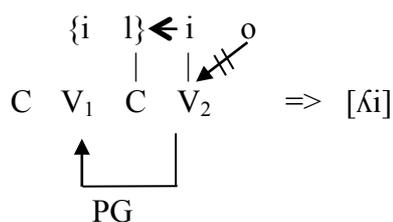
Q2. What happened on the way from standard to spoken?

- (26) Dative marker is
- lexically associated**
- , will always palatalize, no allomorphy

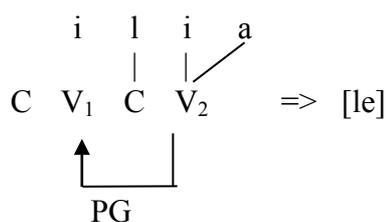


- Now recall that masculine = floating /o/; feminine = associated /a/; plural /i/

- (27) Ms.SG: floating /o/ cannot combine with dative /i/.

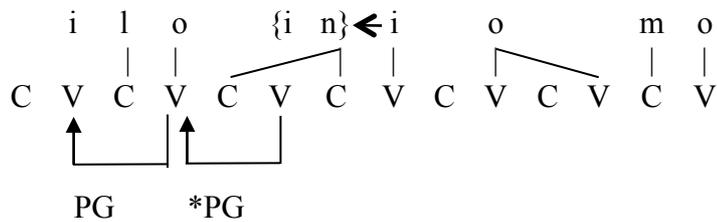


- (28) FM.SG (ONLY IN STANDARD) Non-floating feminine /a/ combines with dative /i/; resulting [e] cannot palatal license



³ As any standard variety, when it is spoken there is much variation. Several speakers introduce plural clitics into Standard Spoken Italian by generalizing both λ i and le to their respective plurals.

b. Potential Initial palatal geminate realized [lojpo:mo]

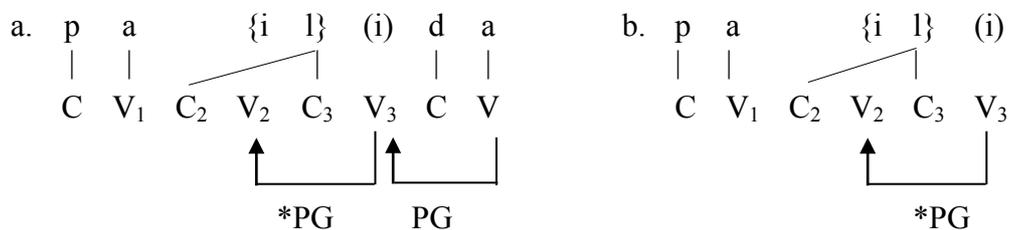


▪ **An advantage:** As in the case of /iʎ/ => [i] in (17) above, our representation of the inherent palatal geminates explains why in Standard Italian they are forbidden in coda position and word-finally; the palatal licenser following the palatalized consonant must be associated to its own V-slot.

(32) Restriction of palatalized codas

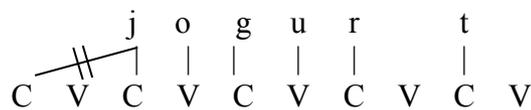
[sol]	‘sun’	*[soʎ]
[bonton]	‘good manners’	*[bontɔɲ]
[gas]	‘gas’	*[gaʃ]
[kolto]	‘educated’	*[koʎto]
[punto]	‘point’	*[puɲto]
[kɔsta]	‘coast’	*[kɔʃta]

(33) Illicit coda palatals in Standard Italian

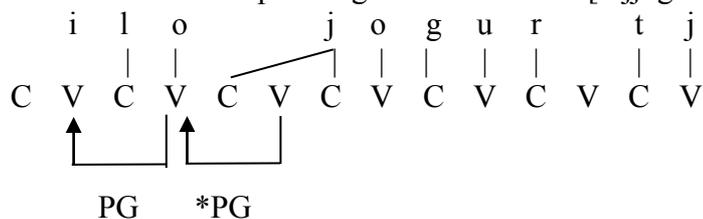


(34) Initial /j/ is always geminated

a. Potential Initial palatal geminate [ˈjoɡurt]



b. Potential Initial palatal geminate realized [lojjoɡurt]

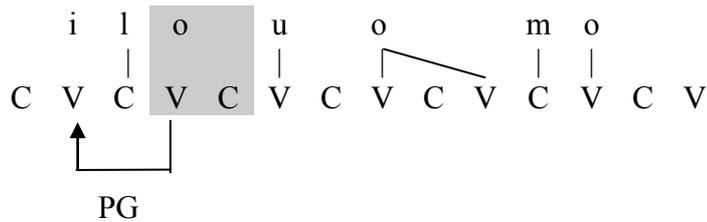


(35) Initial /w/ never geminated, but it is either consonantal or vocalic

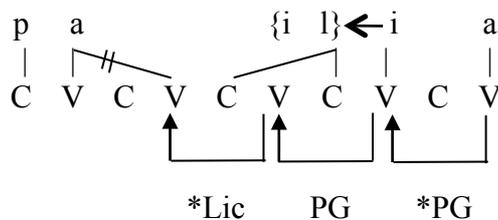
a. [il wokk] ‘the wok’ (pl. [i wokk]; cf. [il ka:ne, i ka:ni])



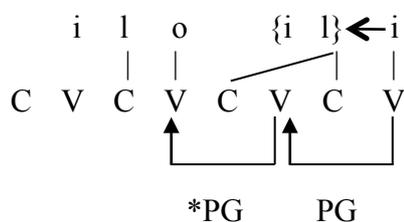
b. [lwɔ:mo] ‘the man’ (pl. [lwɔmini]; cf. [lazino, lazini]): shaded part truncated



(36) Interaction with penultimate vowel length under stress: [pa:lla], *[pa:la] or *[pa:lla]



(37) The plural article [li] also has a virtual geminate, as proved by [lo:lli] ‘the gli’



7. Preposition-article sequences

(This part has been presented at GLOW 2018 held in Budapest as “Prepositions of Italian Unite! A non-allomorphic account of prepositions-article sequences”)

(38)	prep.	M sg			F sg	
		a.	b.	c.	d.	e.
article		il	lo	l	la	l
i.	di	del	dello	dell	della	dell
ii.	in	nel	nello	nell	nella	nell
environment		__C/TR	__CC	__V	__C	__V

Index
TR=branching onset. e.g. [tr]
CC=other clusters, e.g. [sk]

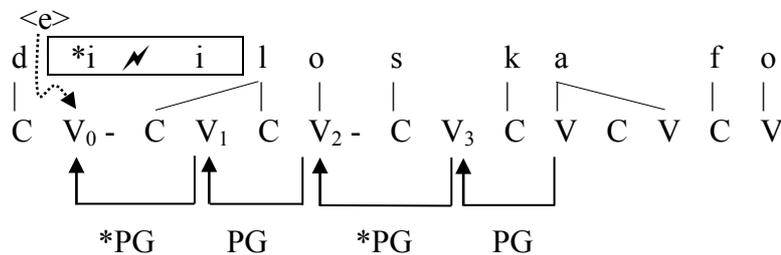
- *di* does not trigger raddoppiamento fonosintattico [di kárlo] ‘Carlo’s’, *[di kkárlo]. Consequently, its UR involves a single CV (Passino 2013:335-ff.).

(39) [di kárlo] ‘Carlo’s’

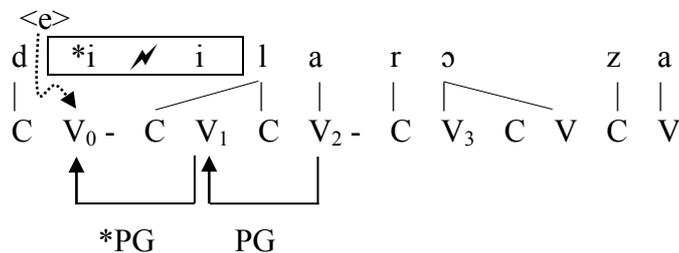


- When followed by the definite article, if our proposal is correct, gemination is only expected.
- The same holds for the feminine form, which up until now presented no evidence for CV₁ in the article.

(40) [dello ska:fo] ‘of the skull’

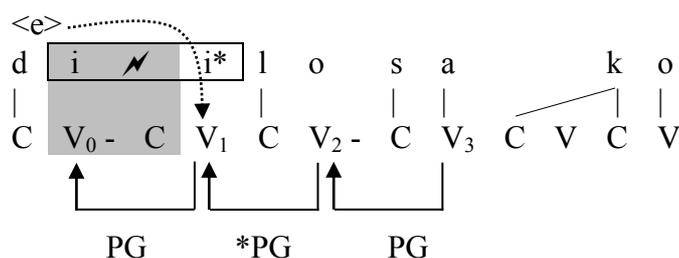


(41) [della rɔ:za] ‘of the rose’



- Our proposal can even motivate the appearance of [e], rather than [i], in [dello], [della]: the /i/ of the preposition creates an OCP violation with that of the article.
- As a result, an epenthetic <e> is inserted in V₀.
- In [del], because V₁ is ungoverned, epenthesis will occur there, and the sequence V₀C will be truncated:

(42) [del sakko] ‘of the bag’



- By simply extending the analysis of previous work, we've motivated the alternations in the form of prepositions before articles without reference to allomorphy.
- The inclusion of both CV₁ and the floating /i/ in the feminine article is now supported.
- The only price to pay is epenthetic <e> (pace Repetti 2012). But this idea is motivated independently: i. [e] is the vowel of hesitation in Italian; ii. [e] is inserted in loans ending in a consonant [il gølle]; and iii. /in_+il/ => [nel].

8. Conclusion

- We have reduced the allomorphy to one underlying representation in both singular and plural. Rather than being ad-hoc, our analysis provides insight into other aspects of the language, such as geminate distribution and pronominal clitics.
- The tools that were used and their motivation:
 - 1) Government: an entire literature
 - 2) Some palatals as geminates: intervocalic distribution.
 - 3) The view of two underlying /i/'s: the first is a palatalizer, the second a palatal licenser. That both must be present for the palatalized consonant to appear is a language-specific requirement.

Take-home message

There is no allomorphy in the Italian article. Before one opts for the allomorphic view, it is important to consider sophisticated autosegmental representations and well-formedness conditions, rather than letter-based representations.

References

- Bendjaballah, Sabrina. 1999. Trois figures de la structure interne des gabarits. PhD thesis, Université Paris 7.
- Charette, Monik. 2003. Empty and pseudo-empty categories. In *Living on the Edge: 28 Papers in Honour of Jonathan Kaye*, ed. Stefan Ploch. Berlin and New York: Mouton de Gruyter. 465-480.
- Kaye, Jonathan, Jean Lowenstamm and Jean-Roger Vergnaud. 1990. Constituent structure and government in phonology. *Phonology Yearbook* 7: 193-231.
- Kenstowicz, Michael and Charles Kisseberth. 1979. *Generative Phonology*. San Diego: Academic.
- Faust, Noam. 2014. Templatic metathesis in Tigre imperatives. *Phonology* 31: 209-227
- Faust, Noam. 2015. Modern Hebrew Guttural G osts and the competition for inhibition. ms. Université Paris 8.
- Lampitelli, Nicola. 2010. Nounness, gender, class and syntactic structures in Italian nouns. *Romance Languages and Linguistic Theory 2008. Selected Papers from 'Going Romance' Groningen 2008*. R. Bok-Bennema, B. Kampers-Mahne & B. Hollebrandse (eds.). Amsterdam, John Benjamins, 195-214

- Larsen, Bergeton Uffe 1998. Vowel length, Raddoppiamento Sintattico and the selection of the definite article in Italian. *Langues et Grammaire II-III, Phonologie*, edited by Patrick Sauzet, 87-102. Paris: Université Paris 8.
- Lowenstamm, Jean. 1996. CV as the Only Syllable Type. In *Current Trends in Phonology Models and Methods*, ed. by Jacques Durand & Bernard Laks, European Studies Research Institute, University of Salford. 419-442.
- Lowenstamm, Jean. 2000. The Image of a Segment. In *Naturally ! Linguistic Studies in Honour of Wolfgang Ulrich Dressler Presented on the Occasion of his 60th Birthday* C. Schaner-Wolles, J. Rennison, F. Neubarth (eds.) Rosenberg & Sellier, Torino.
- Nespor, Marina. 1993. *Les structures del linguaggio. Fonologia*. Bologna: Il Mulino.
- Passino, Diana. 2009. An Element-based Analysis of Italian Inflection in *Selected Proceedings of Décebrettes 6*, eds., F. Montermini, G. Boyé and J. Tseng, 63-75. Somerville, MA., Cascadilla Press.
- Passino, D. 2013. A unified account of consonant gemination in external sandhi in Italian: Raddoppiamento Sintattico and related phenomena. *The Linguistic Review*, 30(2):313-346.
- Repetti, L. 2012. Consonant-Final Loanwords and Epenthetic Vowels in Italian. *Catalan Journal of Linguistics*, 11:167-188.
- Scheer, Tobias. 2004. *A Lateral Theory of Phonology. Vol 1: What is CVCV, and Why Should it Be?* Berlin: Mouton de Gruyter.