

Positional Faithfulness in Harmonic Grammar

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NELS 44, October 18–20, 2013

Introduction

- Jesney (2011a): Positional Licensing (PL; e.g. Walker 2011) is more powerful in Harmonic Grammar (HG) than in OT.
- Only in HG can PL produce licensing in multiple contexts.
- Tamil (Ramasamy 2010, Christdas 1988): coronals appear in onsets and initial-syllable codas (1). Elsewhere they assimilate (2).

(1)	tun.bā	‘sorrow’	(2)	/pasan̩ + ka:l/	pasɔŋgɔ	‘children’
	mun.ʃi	‘teacher’		/kappal + ʃaan/	kappɔʃt̪āā	‘ship (emph.)’
	ʃan̩.bā	‘friend’				
	maar.xɔ.ʃi	a month				

- Jesney shows that a PL analysis of these facts is possible only in HG.
 - In OT, multiple licensing contexts require Positional Faithfulness (Beckman 1999).
 - Jesney: PL may entirely replace PF in HG.
 - This would be welcome:
 - PF and PL overlap (Kaplan 2013).
 - PF makes incorrect predictions (Jesney 2011b).
 - Our argument: PF is still necessary in HG.
 - The analysis for coronals in Tamil is incompatible with non-coronals.
 - PL triggers assimilation, but does not dictate directionality.
- ⇒ PF is the correct solution for both problems.

Licensing for Coronals

- Jesney: a PL analysis of licensing in multiple contexts is only possible in HG.
- OT: both LICENSE(place, Onset) and LICENSE(coronal, σ_1) must outrank FAITH, otherwise they have no effect.
- But this results in coronals surfacing only in the onset of σ_1 because only there do they satisfy both licensing constraints:

(3)	/maarkaɻiy/	LIC(place, Onset)	LIC(coronal, σ_1)	IDENT(place)
(☞) a. maar.xɔ.ʃi		*!	*!	
⊗ b. maan̩.xɔ.ʃi				**
c. maan̩.xɔ.ʃi			*!	*
d. maar.xɔ.ʃi		*!		*

- OT requires a PF account (Beckman 1999).
- Licensing in two contexts: a segment is permitted when it does not violate both licensing constraints.
- I.e., violating one licensing constraint is better than violating FAITH; violating both is worse.
- This is possible in HG:
 - $w(\text{FAITH}) > w(\text{LICENSE}(\text{place, Onset}))$, $w(\text{LICENSE}(\text{coronal, } \sigma_1))$: faithfulness wins when one licensing constraint is violated.
 - $w(\text{FAITH}) < w(\text{LICENSE}(\text{place, Onset})) + w(\text{LICENSE}(\text{coronal, } \sigma_1))$: violating both licensing constraints triggers unfaithfulness.

- Under these conditions, coronals are preserved in onsets and σ_1 :

(4)	/maarkaɻiy/	IDENT(Place) ₃	LIC(place, Onset) ₂	LIC(coronal, σ_1) ₂	H
(☞) a. maar.xɔ.ʃi			-1	-1	-4
b. maan̩.xɔ.ʃi		-2			-6
c. maan̩.xɔ.ʃi		-1		-1	-5
d. maar.xɔ.ʃi		-1	-1		-5

- ... and they assimilate elsewhere:

(5)	/kappal + ʃaan/	IDENT(Place) ₃	LIC(place, Onset) ₂	LIC(coronal, σ_1) ₂	H
a. kap.pɔʃt̪āā			-1	-1	-4
(☞) b. kap.pɔʃt̪āā		-1			-3

- In HG, PL does some of the work of PF. Maybe PF is superfluous.

Licensing for Non-Coronals

- Non-coronals assimilate in all codas:

(6)	/maram + ʃaan/	ma.rɔŋ.ʃāā	‘tree (emph.)’
	/koʃam + tooŋɻiy/	ko.ʃɔŋ.tooŋ.ʃi	‘an implement for dredging ponds’
	/maram + ka:l/	ma.rɔŋ.gɔ	‘trees’

- Under the analysis in (5), only coronals assimilate because only they are subject to *both* licensing constraints (only violations for /m/ are shown):

(7)	/maram + ka:l/	IDENT(Place) ₃	LIC(place, Onset) ₂	LIC(coronal, σ_1) ₂	H
⊗ a. ma.rɔŋ.gɔ			-1		-2
(☞) b. ma.rɔŋ.gɔ		-1			-3

- Here we need $w(\text{LICENSE}(\text{place, Onset})) > w(\text{IDENT}(\text{Place}))$, but that is incompatible with the analysis of coronals.
- Solution: $w(\text{LICENSE}(\text{place, Onset})) > w(\text{IDENT}(\text{Place}))$ to trigger assimilation, plus another constraint to block assimilation of coronals in σ_1 .
- Such a constraint must be a Positional Faithfulness constraint: IDENT(cor)- σ_1

(8)	/maram + ka:l/	IDENT(cor)- σ_1 ₄	LIC(place, Onset) ₃	IDENT(Place) ₂	H
a. ma.rɔŋ.gɔ			-1		-3
(☞) b. ma.rɔŋ.gɔ				-1	-2

(9)	/maarkaɻiy/	IDENT(cor)- σ_1 ₄	LIC(place, Onset) ₃	IDENT(Place) ₂	H
(☞) a. maar.xɔ.ʃi			-1		-3
b. maan̩.xɔ.ʃi		-1		-1	-6
c. maar.xɔ.ʃi			-1	-1	-5

- Another problem: licensing triggers assimilation but doesn’t control directionality:

(10)	/maram + ka:l/	IDENT(cor)- σ_1 ₄	LIC(place, Onset) ₃	IDENT(Place) ₂	H
a. ma.rɔŋ.gɔ			-1		-3
(☞) b. ma.rɔŋ.gɔ				-1	-2
⊗ c. ma.rɔŋ.bɔ				-1	-2

- Codas assimilate to onsets. This is a positional generalization and requires a positional account: IDENT(place)-Onset.
- ⇒ We’ve replicated Beckman’s PF analysis in the essentials.
- Summary:
 - The licensing-in-multiple-contexts analysis is incompatible with non-coronals.
 - PL also cannot predict the direction of assimilation.
 - PF repairs the analysis.

Conclusion

- PL cannot fully replace PF in HG.
- As in OT, PL triggers feature sharing but cannot dictate the direction of assimilation.
- If the relevant generalization for this part of a phenomenon is positional, we still need PF.
- Admitting both positional licensing and positional faithfulness leads to some redundancy, but this situation seems unavoidable in both HG and OT.
- HG has advantages over OT, but this is not one of them.

Positional Faithfulness is as necessary in HG as it is in OT.

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Acknowledgements Thanks to Shannon Barrios, Abby Kaplan, Ed Rubin, and members of the UU Speech Acquisition Lab for their many helpful comments and questions.