

Positional Faithfulness in Harmonic Grammar

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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)	/pasam + ka:l/	pasɔŋgɔ	‘children’
	mun.ʃi	‘teacher’		/kappal + ʃaan/	kappɔʃtāā	‘ship (emph.)’
	ʃaŋ.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), and PF makes incorrect predictions (Jesney 2011b).

We give 2 arguments that PF is still necessary in HG.

1. PL triggers assimilation, but does not dictate directionality.
 2. The PL analysis for coronals in Tamil is incompatible with non-coronals.
- ⇒ PF is the correct solution for both problems.

Nasal Place Assimilation

- Coronal codas assimilate outside σ_1 (2); non-coronals assimilate in all codas:

(3)	/maram + ʃaan/	ma.rɔŋ.dāā	‘tree (emph.)’
	/koʃam + toŋʃiy/	ko.ʃn.toŋ.ʃi	‘an implement for dredging ponds’
	/maram + kaʃ/	ma.rɔŋ.gɔ	‘trees’

- This requires $w(\text{LICENSE}(\text{place}, \text{Onset})) > w(\text{IDENT}(\text{Place}))$, but doesn't determine directionality:

(4)	/maram + kaʃ/	LIC(place, Onset) ₃	IDENT(Place) ₂	H
	a. ma.rɔm.gɔ	-1		-3
	☞ b. ma.rɔŋ.gɔ		-1	-2
	⊗ c. ma.rɔm.bɔ		-1	-2

- Codas assimilate to onsets. This is a positional generalization and requires a positional account: IDENT(place)-Onset.

(5)	/maram + kaʃ/	IDENT(Place)-Ons ₄	LIC(place, Onset) ₃	IDENT(Place) ₂	H
	a. ma.rɔm.gɔ		-1		-3
	☞ b. ma.rɔŋ.gɔ			-1	-2
	c. ma.rɔm.bɔ	-1		-1	-6

Coronals with Only Licensing

- Coronals are licensed in two contexts, onsets and initial-syllable codas.
- 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:

(6)	/maarkaɔy/	LIC(place, Onset)	LIC(coronal, σ_1)	IDENT(place)
	☞ a. maar.xɔ.ʃi	*!	*!	
	⊗ b. maaŋ.xɔ.ʃi			**
	c. maaŋ.xɔ.ʃi		*!	*
	d. maar.xɔ.ʃi	*!		*

- Jesney shows that a PL-only account is possible in HG:
 - $w(\text{FAITH}) > w(\text{LICENSE}(\text{place}, \text{Onset}))$, $w(\text{LICENSE}(\text{coronal}, \sigma_1))$: faithfulness wins when one licensing constraint is violated.
 - $w(\text{FAITH}) < w(\text{LICENSE}(\text{place}, \text{Onset})) + w(\text{LICENSE}(\text{coronal}, \sigma_1))$: violating both licensing constraints triggers unfaithfulness.
- Under these conditions, coronals are preserved in onsets and σ_1 (7) and assimilate elsewhere (8):

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

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

The Necessity of PF

- Problem: the PL account is incompatible with (3) and (5):

(9)	/maram + kaʃ/	IDENT(Place) ₃	LIC(place, Onset) ₂	LIC(coronal, σ_1) ₂	H
	⊗ a. ma.rɔm.gɔ		-1		-2
	☞ b. ma.rɔŋ.gɔ	-1			-3

- Solution: instead of using two PL constraints to trigger assimilation outside σ_1 , let LICENSE(place, Onset) trigger assimilation everywhere and adopt another constraint to block assimilation of coronals in σ_1 .
- The new constraint must be a Positional Faithfulness constraint: IDENT(cor)- σ_1

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

(11)	/maram + kaʃ/	IDENT(cor)- σ_1 ₄	LIC(place, Onset) ₃	IDENT(Place) ₂	H
	a. ma.rɔm.gɔ		-1		-3
	☞ b. ma.rɔŋ.gɔ			-1	-2

⇒ We've replicated Beckman's PF analysis in the essentials.

- Summary:
 - The licensing-in-multiple-contexts analysis is incompatible with non-coronals.
 - 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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