

Positional Faithfulness in Harmonic Grammar

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1. Introduction

- According to Jesney (2011a) Positional Licensing (e.g. Walker 2011) is more powerful in Harmonic Grammar (HG) than in OT
- Only in HG can Positional Licensing produce licensing in multiple contexts
- Jesney (2011a) shows that a Positional Licensing analysis of these facts is possible only in HG
- In OT, multiple licensing contexts require Positional Faithfulness (Beckman 1999)
- Jesney (2011a, 2011c) argues that Positional Licensing may entirely replace Positional Faithfulness in HG
- This would be welcome
 - Positional Faithfulness and Positional Licensing overlap (Kaplan 2013)
 - Positional Faithfulness makes incorrect typological predictions (Jesney 2011b, 2011c)
- In Tamil Positional Faithfulness is still necessary
 - Positional Licensing analysis for Tamil coronals is incompatible with non-coronals
 - Positional Licensing triggers assimilation but does not dictate directionality
 - Though Jesney (2011c) does propose modifying Positional Licensing constraints to dictate direction of assimilation
- Organization of Talk:
 - Assimilation in Tamil
 - Positional Licensing analysis of licensing in multiple-contexts for coronals
 - Issues with Positional Licensing-only analysis of licensing for non-coronals
 - Solution

2. Assimilation in Tamil

- Tamil (Ramasamy 2010, Christdas 1988)
 - Coronals appear in onsets and in initial-syllable codas (1)
 - Elsewhere they assimilate (2)
 - Non-coronals are allowed in onsets, but always assimilate in codas (3)

- (1)
- | | | |
|----|-----------|-----------|
| a. | tun.bã | ‘sorrow’ |
| b. | mun.ɟɪ | ‘teacher’ |
| c. | ṅaŋ.bã | ‘friend’ |
| d. | maar.xɜ.ɻ | a month |

- (2)
- | | | | |
|----|-----------------|-----------|----------------|
| a. | /pasəŋ + ka:l/ | pa.səŋgɜ | ‘children’ |
| b. | /kappal + ʈaan/ | kappɜʈtãã | ‘ship (emph.)’ |

- (3)
- | | | | |
|----|----------------|-----------|-------------------|
| a. | /maram + ka/ | marɜŋgɜ | ‘trees’ |
| b. | /maram + ʈaan/ | [marɜŋdã] | ‘tree (emphatic)’ |

- Licensing in multiple contexts
 - Consonant place features licensed in onsets
 - Coronal licensed on sonorants in initial syllable codas

Thank you to the audiences of NELS 2013 and Phonology 2013 for their helpful feedback and suggestions

3. Coronals with Only Licensing (Jesney, 2011a)

- A positional licensing analysis of licensing in multiple contexts is only possible in HG
- Coronals are licensed in two contexts, onsets and initial-syllable codas
- OT
 - LICENSE(place, Onset) – place features are licensed by onsets
 - LICENSE(coronal, σ_1) – coronal place features are licensed on sonorants in the initial syllable
 - Both licensing constraints must outrank the Faithfulness constraint otherwise they have no effect
- But this results in coronals surfacing only in the onset of the initial syllable because only there do they satisfy both licensing constraints

(4)

/maarka _{ij} /	LIC(place,)	LIC(coronal, σ_1)	IDENT(place)
a. maar.x3.ɿ	*!	*!	
b. maan _ɿ .x3.ʔɿ			**
c. maan _ɿ .x3.ɿ		*!	*
d. maar.x3.ʔɿ	*!		*

- An OT analysis requires Positional Faithfulness (as in Beckman (1999))
- Jesney shows that a Positional Licensing-only account 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 initial syllables (5) and assimilate elsewhere (6)

(5)

/maarka _{ij} /	IDENT(place)	LIC(place, Onset)	LIC(coronal, σ_1)	<i>H</i>
	3	2	2	
a. maar.x3.ɿ		-1	-1	-4
b. maan _ɿ .x3.ʔɿ	-2			-6
c. maan _ɿ .x3.ɿ	-1		-1	-5
d. maar.x3.ʔɿ	-1	-1		-5

(6)

/kappal + _ɿ aan/	IDENT(place)	LIC(place, Onset)	LIC(coronal, σ_1)	<i>H</i>
	3	2	2	
a. kap.p3l.tãã	-1			-3
b. kap.p3l.tãã		-1	-1	-4

- A positional licensing analysis of coronals in multiple contexts is possible only in HG, as shown by Jesney (2011a)
- But a positional licensing analysis of non-coronals in multiple contexts is not possible

4. The Necessity of Positional Faithfulness – Non-Coronals in Tamil

- Non-coronals are preserved in onsets and assimilate in all codas to the following onset
- The constraints and the weighting necessary for coronals is incompatible with that for non-coronals

(7)

/maram + ka/	IDENT(place) 3	LIC(place, Onset) 2	LIC(coronal, σ_1) 2	<i>H</i>
a. ma.r3ŋ.g3	-1			-3
b. ma.r3m.g3		-1		-2

- Solution: instead of using two Positional Licensing constraints to trigger assimilation outside the initial syllable, let LICENSE(place, Onset) trigger assimilation everywhere and adopt another constraint to block assimilation of coronals in initial syllable
- The new constraint must be a Positional Faithfulness constraint: IDENT(cor)- σ_1
- Allows for preservation of coronals in initial syllable codas

(8)

/maarkaŋj/	IDENT(cor) - σ_1 4	LIC(place, Onset) 3	IDENT(Place) 2	<i>H</i>
a. maar.x3.ŋ		-1		-3
b. maarŋ.x3.ŋ	-1		-1	-6
c. maar.x3.ʔ		-1	-1	-5

- Allows for assimilation of non-coronals in codas

(9)

/maram + ka/	IDENT(cor) - σ_1 4	LIC(place, Onset) 3	IDENT(Place) 2	<i>H</i>
a. ma.r3ŋ.g3			-2	-2
b. ma.r3m.g3		-1		-3

5. Direction of Assimilation

- Positional Licensing does not dictate the direction of assimilation

(10)

/maram + ka/	LIC(place, Onset) 3	IDENT(Place) 2	<i>H</i>
a. ma.r3m.g3	-1		-3
b. ma.r3ŋ.g3		-1	-2
c. ma.r3m.b3		-1	-2

- Jesney (2011c) proposes modifying Positional Licensing constraints to dictate direction of assimilation
- Positional Faithfulness is necessary for analyzing non-coronal patterns
 - If it is necessary for part of the data, then it should be used to dictate directionality of assimilation
 - Avoids creating more complicated Positional Licensing constraints
 - Codas assimilate to onsets. This is a positional generalization and requires a positional account: IDENT(place)-Onset.

(10)

/maram + ka/	IDENT(place)-Ons 4	LIC(place, Onset) 3	IDENT(Place) 2	<i>H</i>
a. ma.r3m.g3		-1		-3
b. ma.r3ŋ.g3			-1	-2
c. ma.r3m.b3	-1		-1	-6

6. 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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