Positional Faithfulness in Harmonic Grammar

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Jesney (to appear) argues that Harmonic Grammar (HG) provides crucial dexterity to positional licensing (PL) that (classic) OT does not, and she speculates that PL may be sufficiently versatile in HG to render positional faithfulness (PF) superfluous. This would be a welcome result because OT requires both PL and PF (e.g. Walker 2011), despite the significant redundancy in admitting them both. In this paper we argue that HG does not in fact avoid this redundancy. HG requires PF for the same reasons that OT does: PL motivates feature sharing between strong and weak positions but cannot determine which position assimilates to the other. A fuller account of the data Jesney presents reveals this fact.

Jesney’s account of consonantal place restrictions in Tamil (Christdas 1988, Ramasamy 2010) is driven by PL. Generally, codas in Tamil assimilate in place to a following onset (1), and the constraint $\text{PLACE} \Rightarrow \text{ONSET}$, which penalizes place features that aren’t associated with an onset, captures this. However, coronal sonorant codas in the initial syllable are exempt from the assimilation requirement (2). Jesney uses $\text{COR} \Rightarrow \text{SON}_{\sigma 1}$, which penalizes coronal features that are not associated with a sonorant in the initial syllable, to account for this fact. Jesney shows that an OT account using these constraints fails: satisfaction of both $\text{PLACE} \Rightarrow \text{ONSET}$ and $\text{COR} \Rightarrow \text{SON}_{\sigma 1}$ means that coronals surface only on sonorants in the onset of initial syllables. Beckman’s (1999) OT-based analysis avoids this problem by employing PF instead, but Jesney shows that the problem is nonexistent in HG: coronal codas are permitted in the initial syllable (3a) and undergo assimilation in other codas (3b). The implication is that PF may be unnecessary in HG.

But when applied to a broader range of data, the PL-only HG analysis falters. Since the analysis penalizes all coronals outside the initial syllable, a form like /maram + taa/ı/ ‘tree (emph.)’ is incorrectly predicted to show progressive assimilation (4). This is easily rectified by adopting $\text{IDENT(PLACE)} \Rightarrow \text{ONSET}$ (5). Assimilation is always regressive, and $\text{IDENT(PLACE)} \Rightarrow \text{ONSET}$ ensures that this is the favored repair when the input contains a non-place-linked coda.

In contrast, the analysis becomes intractable without PF. We can repair (4) by adding a context-free $\text{LABIAL}$, but this is a pyrrhic victory: the resulting analysis predicts that labials will always assimilate to other consonants, regardless of their syllabic position. While /maram + taa/ı/ is accommodated, /tp/ı/ and /tp/ı/ are incorrectly predicted to exhibit progressive assimilation. For the latter, relying on the relative weights of $\text{LABIAL}$ and $\text{DORSAL}$ to govern the direction of assimilation leads to a contradiction. For /maram + kal/ı/ the weight of $\text{LABIAL}$ must be greater than that of $\text{DORSAL}$, but the opposite is required for /tp/ı/ı/. An analysis along these lines fails. Similar results hold if we try to use the interaction of $\text{IDENT}$-Dorsal and $\text{IDENT}$-Labial.

The problem is that context-free constraints ignore the proper generalization regarding directionality, which is that codas assimilate to onsets. $\text{PLACE} \Rightarrow \text{ONSET}$ is satisfied as long as the coda and onset match in place features, regardless of the direction of assimilation, and $\text{COR} \Rightarrow \text{SON}_{\sigma 1}$ tips the scales against coronals regardless of syllabification. In contrast, dictating the direction of assimilation is one of the core functions of PF (Beckman 1999, Walker 2011), and an analysis built on PF succeeds where alternatives do not.

In summary, although PL in HG can do some of the work usually done by PF in OT, it cannot fully supplant PF. Just as in OT, PL can motivate feature sharing but cannot dictate the direction of assimilation. If the relevant generalization for this part of a phenomenon is positional, we must still call on PF. Admitting both PL and PF leads to some redundancy because these constraint types partially overlap in their effects, but this situation seems unavoidable in both HG and OT.
References


