

Long-Distance Licensing in Harmonic Grammar
Aaron Kaplan
University of Utah

This paper examines positional licensing’s ability under Harmonic Grammar (HG) to model the typology of assimilation patterns that target prominent positions. In the Romance variety of Central Veneto, e.g., a post-tonic high vowel triggers raising of the stressed vowel and any vowels between it and the stressed syllable: /órden-i/ → [úrdin-i] ‘order (2sg. pres. ind.)’ (Walker 2011). Under Walker’s (2011) OT-based theory of such systems, a positional licensing constraint LICENSE(λ, π) outranks IDENT and requires the element λ (e.g. [+high]) to appear in position π (e.g. the stressed syllable). I argue that the typology of Veneto-like systems is produced in HG only if a significant change to licensing constraints is made: they must penalize not just the failure of λ to appear in π , but also the failure of λ to appear in intervening positions, too. This change necessitates the adoption of other recent theoretical proposals (see below) that ensure proper behavior of the constraints, thus providing further support for those proposals.

Under HG, standard positional licensing is pathological. Assimilation in [úrdin-i] requires $w(\text{LICENSE}) > w(\text{IDENT})$. While failure to assimilate violates LICENSE once, spreading to n segments violates IDENT n times. Increasing the distance between trigger and target leads to a greater penalty from IDENT, so for any weights, eventually $n(w(\text{IDENT})) > w(\text{LICENSE})$: spreading to sufficiently many positions is less harmonic than failure to spread; see (1). Under the weights shown in (1), spreading to two positions is permitted (/ée-i/ → [ii-i]), but spreading to three is not (/éee-i/ → [éee-i]). In both cases, failure to spread incurs a penalty of -5 (from one LICENSE violation). Assimilation has a penalty of -4 in the first case (two IDENT violations) and -6 in the second case (three violations). By manipulating the constraint weights we can arbitrarily designate an upper bound for the distance spreading can cross. This kind of pattern is unattested. While the presence or quality of intervening segments can affect assimilation in Veneto-like systems, the number of intervening segments does not (Walker 2011).

The problem arises because LICENSE assigns a static penalty to the faithful form, and therefore the motivation for harmony does not keep up with IDENT’s increasing penalty. The solution developed here reformulates positional licensing so that it assigns violations for failure to spread to the intervening positions. Thus as the distance between trigger and target increases, LICENSE penalizes failure to spread to the same extent that IDENT penalizes its occurrence. Such distance-sensitive harmony constraints suffer from well-known defects (e.g. Wilson 2006): for example, they can motivate deletion of material instead of triggering harmony as a means of eliminating violations (2). Kimper (2011) shows that this is remedied by reinterpreting these constraints as positive constraints that reward spreading instead of penalizing its absence. With positive distance-sensitive positional licensing, the reward for spreading increases with the number of intervening positions, countering IDENT’s increasing penalties (3). For assimilation to n positions, LICENSE gives a reward of $n(w(\text{LICENSE}))$, and IDENT a penalty of $-n(w(\text{IDENT}))$. As shown in (3), under $w(\text{LICENSE}) > w(\text{IDENT})$, assimilation always receives a positive score and emerges as most harmonic because the no-spreading candidate has a score of 0 (no penalty/reward from IDENT or LICENSE). The no-distant-licensing pathology is eliminated.

One final move is necessary. Positive constraints invite runaway derivations (e.g. unbounded epenthesis to increase LICENSE’s reward) unless Serial HG is employed (Kimper 2011). Therefore, the necessity of positive LICENSE argues for Serial HG. Once this framework is adopted, distance-sensitive positional licensing produces Veneto-like harmony systems without the no-distant-licensing pathology, the pathologies that gradient constraints can invite, or runaway derivations.

This result provides support for recent theoretical developments, namely positively formulated constraints and a serialist implementation of HG. More broadly, this result reinforces the conclusion that HG and OT can require very different constraints, and it lays the foundation for building a sound theory of positional licensing in HG that can produce the full range of licensing-based phonological phenomena.

(1) a.

/ée-i/	LICENSE ₅	IDENT ₂	H
a. ée-i	-1		-5
☞ b. íi-i		-2	-4

 b.

/éee-i/	LICENSE ₅	IDENT ₂	H
☞ a. éee-i	-1		-5
b. íii-i		-3	-6

(2)

/órdeni/	LICENSE ₅	IDENT ₂	MAX ₁	H
a. órdeni	-2			-10
☞ b. úrdini		-2		-4
☛ c. úrdni		-1	-1	-3

(3) a.

/ée-i/	LIC ₅	IDENT ₂	H
a. ée-i			0
☞ b. íi-i	2	-2	6

 b.

/éee-i/	LIC ₅	IDENT ₂	H
a. éee-i			0
☞ b. íii-i	3	-3	9

References

- Kimper, Wendell A. (2011) *Competing Triggers: Transparency and Opacity in Vowel Harmony*. Ph.D. thesis, University of Massachusetts, Amherst, Amherst, MA.
- Walker, Rachel (2011) *Vowel Patterns in Language*. New York: Cambridge University Press.
- Wilson, Colin (2006) Unbounded Spreading is Myopic. Paper presented at *PhonologyFest*, Bloomington, Indiana June 23.