Secondary Stress in Spanish: Obstacles to a Faithfulness-Based Account

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While primary stress in Spanish is sensitive to syllable weight and morphology, secondary stress exhibits a simple quantity-insensitive bidirectional pattern. In forms with two or more syllables preceding the primary stress, a secondary stress occurs on the initial syllable and on every other syllable to the left of the primary. When an odd number of syllables precede the primary stress, as in generativo, burocratización, and gràmaticàlidád, the result is a lapse following the initial stress.

Bidirectional patterns like the Spanish pattern can be accounted for in terms of basic directional parsing considerations (McCarthy and Prince 1993, Gordon 2002, Hyde 2002). In McCarthy and Prince’s (1993) Generalized Alignment approach, for example, two constraints are crucial, the categorical alignment constraint PrWD-L “the left edge of every prosodic word coincides with the left edge of a foot” and the gradient alignment constraint All-FEET-R “the right edge of every foot coincides with the right edge of a prosodic word”. When PrWD-L dominates All-FEET-R, a single foot is be anchored at the left edge of the prosodic word while all others are oriented to the right edge: (óσ)σ(óσ)(óσ)...

Despite the success of the alignment approach, some researchers have questioned the need for gradient alignment, speculating that Spanish-type secondary stress patterns are not basic at all but emerge only under the influence of affixation (Kager 2001, 2005; McCarthy 2003; Alber 2005). It has yet to be demonstrated, however, that an alternative analysis along these lines is actually viable. In this paper, we examine the possibility of using output-output faithfulness constraints (Benua 1997) to produce the Spanish pattern in base + affix forms. Rather than relying on gradient alignment constraints like All-FEET-R, the goal is to produce the characteristic internal lapse by requiring faithfulness to the stress pattern of the base’s (unaffixed) surface form.

(1) OO-Faith-Stress: Every stress in the output of a base form occurs in the same position in the output of the base plus an affix.

As we shall see, there are two cases where OO-Faith-Stress can effectively replace All-FEET-RIGHT in producing the Spanish pattern. The first is when the base itself contains the appropriate internal lapse, as in (2a), so that the lapse can simply be retained when an affix is added. The second is when the appropriate internal lapse can be produced by minimally violating OO-Faith to satisfy some non-alignment requirement, such as clash avoidance, as in (2b).

(2) a. gramatical + idad → (gràma)ti(cálí)(dád)  cf. (gràma)ti(cál)
b. racional + ista → (ràcio)na(lísta)  cf. (ràcio)(nál)
c. matematic + idad → (màte)ma(tici)(dád)  cf. (màte)(màti)co

In other cases, however, non-alignment alternatives appear to be insufficient. For example, when a non-peripheral foot must shift from its position in the base form in order to create the appropriate internal lapse, as in (2c), a gradient constraint like All-FEET-R seems to be required.

The result sheds light on one of the current debates within metrical stress theory: whether or not gradient alignment constraints are necessary to produce the full range of attested binary patterns. In showing that the most obvious non-alignment alternative is actually unworkable, it provides support for the alignment approach.