

## Evidence for syllable quantity distinctions in Proto-Spanish and its significance for the historical evolution of Spanish stress

As is well known, primary word stress in both Latin and Modern Spanish is quantity-sensitive. In Latin, stress fell on a heavy penult; otherwise on the antepenult: *A.MÍ.CU* ‘friend’, *MŌ.DÉS.TU* ‘moderate’, *SĀ.GĪT.TA* ‘arrow’ vs. *LĪM.PĪ.DU* ‘clean’ (cf. Allen 1973, Mester 1994, Jacobs 2003). In Modern Spanish, canonical (unmarked) stress falls on a heavy final syllable not closed by an inflectional consonant, and on the penult if the ultima is light: *a.mór* ‘love’ *ciu.dád* ‘city’ vs. *es.pú.ma* ‘froth’, *ma.és.tro* ‘teacher’ (Harris 1983, Roca 2006). An issue that immediately arises is whether or not nominal stress in earlier stages of Spanish was also weight-sensitive. According to the traditional view (e.g., Roca 1990, Lipski 1997), from the proto-Hispano-Romance stage and up to early Old Spanish stress was based on a syllabic trochee, and thus quantity-insensitive.

This paper offers a new account of the historical evolution of primary word stress in Spanish within the framework of prosodic phonology (e.g., Hayes 1995, McCarthy and Prince 1995, Zec 2003, Nespor and Vogel 2007, Downing 2006, Oosterndorp et al. 2011). Our main objective is to present compelling historical evidence that in spite of the loss of the phonemic vowel length distinctions in Vulgar Latin, syllable weight not only remained active in the assignment of primary word stress during the earliest stages in the historical development of Spanish, but also critically conditioned a number of well-known phonological changes, strongly suggesting an essential continuity of the Latin quantity-sensitive system in its transition to Hispano-Romance and to Modern Spanish. This account has significant implications for the historical evolution of Spanish prosody because it runs counter the traditional view. Two types of compelling evidence from the historical record converge on the hypothesis that the canonical metrical foot in Proto Hispano-Romance was a moraic trochee, and thus quantity-sensitive, thereby casting serious doubts on the validity of a putative quantity-insensitive system. The significance of such evidence has been overlooked in the sparse accounts available on the diachronic evolution of syllable structure and stress in Spanish. First, two early Hispano-Romance sound changes are crucially governed by a light vs. heavy syllable distinction; namely: a) post-vocalic *voicing* took place after an open (i.e., light) syllable (1a) (data in p. 2), but not after a heavy (i.e., closed) one (1b); and b) *pre-tonic syncope* targeted non-low vowels in light syllables (2a), but systematically failed to occur in heavy ones (2b). And second, two exceptional developments took place in monosyllabic words which can only be explained in reference to a minimality restriction in Hispano-Romance, requiring that the smallest prosodic word be co-extensive with the canonical metrical foot. Instructively, these developments are fully compatible with a metrical constituent identified with bimoraic trochee, by not with its disyllabic counterpart. They include: a) the exceptional preservation of a word-final nasal (the accusative singular marker) in a handful of monosyllabic words (3a) vs. its systematic loss in disyllabic or larger words (3b); b) the epenthesis of an accretive yod in a number of present indicative 1<sup>st</sup> person sing. verb forms (3c); and c) the otherwise general simplification of identical vowels (cf. *sīgillu* ‘image’ > *seello* > *sello* ‘stamp’, *FRĪGĪDU* > \**friidu* > *frido* > *frío* ‘cold’, etc.) failed to apply to a small number of lexical items where it would have resulted in sub-minimal (i.e., monosyllabic and monomoraic) words, in violation of word-minimality, and so instead the second vowel undergoes gliding (3d). Most compelling empirical evidence against a weight-insensitive system is provided by medieval *apocope*, whereby deletion of word-final /-e/ turned a large number of disyllabic words into monosyllabic, consonant-ending ones (4). If the minimal prosodic word indeed coincided with the metrical foot in early medieval Spanish, a proposal that identifies the metrical foot with a disyllabic trochee makes the counterfactual prediction that medieval apocope should not have occurred at all, since it resulted in what amounts to a massive infringement of word minimality. By contrast, the fact that apocope systematically applied to disyllabic words, turning them into bimoraic monosyllables, is entirely compatible a bimoraic trochee as the minimal word in pre-apocope Spanish.

- (1) a. LU.PU > lo.bo ‘wolf’  
 VĪ.TA > vi.da ‘life’  
 FŎ.CU > fue.go ‘fire’
- b. CÖR.PU > cuer.po ‘body’  
 PÖR.TAM > puer.ta ‘door’,  
 AU.CA > o.ca ‘goose’
- (2) a. LĪ.M(I).TÁ.RE > lin.dár ‘to border’  
 VĚ.R(E).CŪN.DĪ.A > ver.güén.za ‘shame’  
 DE.L(I).CÁ.TU > del.gá.do ‘thin’
- b. MĪ.NĪS.TĚ.RĪ.U > me.nes.tér ‘need’  
 ĪM.PUL.SÁ.RE > em.pu.jár ‘to push’  
 LĪ.BER.TÁ.TE > li.ber.tád ‘freedom’
- (3) a. QUĚM > quien ‘who’  
 CŪM > con ‘with’  
 TAM > tan ‘so, as’
- b. MENSAM > mesa ‘table’,  
 AMĪCUM > amigo ‘friend’  
 FŎNTEM > fuente ‘fountain’
- c. DŎ (> do) > doy ‘I give’  
 SŪM (> so) > soy ‘I am’  
 VĀDŎ (> vo) > voy ‘I go’
- d. LĒGE > \*lee > ley ‘law’  
 RĒGE > \*ree > rey ‘king’  
 GRĒGE > \*gree > grey ‘flock’
- (4) TŪSSE > tos ‘cough’                      PĀNE > pan ‘bread’                      VĪTE > vid ‘grapevine’  
 MESE > mes ‘month’                      BENE > bien ‘well’                      LĪTE > lid ‘cap’  
 LŪCE > luz ‘light’                      SALE > sal ‘salt’                      RĒTE > red ‘net’

## References

- Allen, W. S. 1973. *Accent and Rhythm*. New York: Cambridge University Press.
- Downing, Laura. 2006. *Canonical Forms in Prosodic Morphology*. New York: Oxford Univ. Press.
- Harris, James 1983. *Syllable Structure and Stress in Spanish*. Cambridge, Mass.: MIT Press.
- Hayes, Bruce. 1995. *Metrical Stress Theory*. Chicago: University of Chicago Press.
- Jacobs, Haike. 2003. The emergence of quantity-sensitivity in Latin. *Optimality Theory and Language Change*, ed. by D. Eric Holt. Dordrecht: Kluwer, 229-247.
- Lipski, John M. 1997. Spanish word stress: the interaction of moras and minimality. *Issues in the Phonology and Morphology of the Major Iberian Languages*, ed. by Fernando Martínez-Gil and Alfonso Morales Front. Washington D.C.: Georgetown University Press, 559-593.
- McCarthy, John, and Alan Prince. 1995. Prosodic morphology. *The Handbook of Phonological Theory*, ed. by John Goldsmith. Cambridge, Massachusetts: Blackwell, 318-366.
- Mester, Armin. 1994. The quantitative trochee in Latin. *Natural Language and Linguistic Theory* 12.1-61.
- Nespor, Marina, and Irene Vogel. 2007. *Prosodic Phonology*. Berlin: Mouton de Gruyter.
- Oosterndorp, Marc van, C. J. Ewen, E. Hume, and K. Rice (eds.). 2011. *The Blackwell Companion to Phonology*, Vol. II: *Subsegmental and Prosodic Phonology*. Malden, Massachusetts: Wiley-Blackwell.
- Roca, Iggy. 1990. Diachrony and synchrony in Spanish word stress. *Journal of Linguistics* 26.133-164.
- Roca, Iggy. 2006. The Spanish stress window. *Optimality-Theoretic Studies in Spanish Phonology*, ed. by Fernando Martínez-Gil and Sonia Colina. Philadelphia: John Benjamins, 237-277.
- Zec, Draga. 2003. Prosodic weight. *The syllable in Optimality Theory*, ed. by Caroline Féry, and Ruben van de Vijver. New York: Cambridge University Press, 123-143.