

Stress and focus in Spanish and Catalan: Patterns of duration and vowel quality

Marta Ortega-Llebaria and Pilar Prieto

University of Texas at Austin and Universitat Autònoma de Barcelona

m.ortega-llebaria@mail.utexas.edu, pilar.prieto@uab.es

The goal of this paper is to investigate the effects of intonational pitch accents and focus on durational patterns in Spanish and Catalan. As it is well-known, accentual prominence is phonetically different in stress accent languages and non-stress accent languages (Beckman 1986). In stress-accent languages like English or Spanish, accentual prominence is conveyed by a number of phonetic correlates, including pitch, duration and intensity. In non-stress accent languages like Basque or Japanese, on the other hand, pitch is the only correlate of accent (Elordieta & Hualde 2001, 2003). Yet, the relationship between duration and pitch is not completely straightforward in stress-accent languages. In this paper, we examine the phonetic correlates of accentual prominence (specifically, pitch, duration and vowel quality) in words bearing a pitch accent (nuclear and prenuclear), a focal accent, and no accent. It will thus be investigated whether duration is amplified in focalized words and whether duration is still a cue to word stress in the absence of a pitch accent. In general, the cues to stress prominence have been studied in words containing a pitch accent, while the other two intonational contexts (namely, focus and no accent) have not been examined (for Spanish, see Navarro Tomás 1964, Quilis 1971, 1978; Llisterri 2003, among others).

Moreover, by examining the potential differences in vowel duration between Spanish and Catalan, we extend De Jong's (2004, 2002) recent result. De Jong (2004, 2002) compared the effects of stress and focus in vowel duration in English and Arabic and concluded that duration differences were amplified in stressed syllables and focused contexts only when these differences cued a phonologically relevant information, i.e. vowel length in Arabic and consonant voicing in English. Therefore, focus and stress acted as an amplifier of those phonetic cues that were phonologically relevant. In Catalan and Spanish, vowel duration does not cue a phonological contrast, but it interacts with pitch in Spanish, and with pitch and vowel reduction in Catalan to signal stressed syllables and pitch-accents. Therefore, Catalan uses one more cue than Spanish to signal stress and pitch-accents. Due to this difference in the number of cues, will Spanish and Catalan differ in the way that duration behaves in stressed syllables and focused contexts in spite that duration is not phonologically relevant in any of those languages?

We recorded 8 subjects, 4 native speakers of Catalan and 4 native speakers of Castilian Spanish, producing short sentences in their native language. These sentences contained four-syllable long verbs that ended in “-minar” or “-nimar”, and were cognates in Spanish and in Catalan, like *determinar* ‘to determine’, *iluminar* ‘to illuminate’, *abominar* ‘to detest’, *desanimar* ‘to discourage’. Each verb was conjugated in the present tense and in the preterit in order to obtain the endings “-mino/ -minó” for Spanish and “-mina/-minà” for Catalan. Sentences were produced within 4 different intonation contours in which the verb ending: (1) bore a pre-nuclear accent like in *Me desanimó Catalina* ‘Catalina discouraged me’, (2) bore a nuclear accent as in *Catalina me desanimó* ‘Catalina discouraged me’, (3) did not have an accent like in parenthetical sentences such as *Va a llover —me desanimó Catalina* ‘It’s going to rain —Catalina discouraged.’ and (4) was in focus, i.e. *Catalina me DESANIMÓ* ‘Catalina DISCOURAGED ME’. Preliminary results reveal that when pitch accents are not present (like in (3)) word stress is not clearly identified by lengthening of the corresponding syllable.

References

Beckman, M. (1986). *Stress and non-stress accent: Netherlands Phonetic Archives 7*. Dordrecht: Foris.

De Jong, Kenneth (2004). Stress, lexical focus, and segmental focus in English: patterns of variation in vowel duration. *Journal of Phonetics*

De Jong, K. J. & Zawaydeh, B. (2002). Comparing stress, lexical focus, and segmental focus: patterns of variation in Arabic vowel duration. *Journal of Phonetics* 30, 53-75.

Elordieta, G. & Hualde, J.I. (2001). The role of duration as a correlate of accent in Lekeitio Basque. *Proceedings of Eurospeech 2001 Scandinavia*, 115-118. Alborg, Denmark: CPK, Alborg University.

Elordieta, G. & Hualde, J.I. (2003). Tonal and durational correlates of accent in contexts of downstep in Lekeitio Basque. *Journal of the International Phonetic Association* 33, 195-209.

Llisterri, J., M. Machuca, M. de la Mora, M. Riera & A. Ríos (2003). The perception of lexical stress in Spanish. *Proceedings of the 15th International Congress of Phonetic Sciences*, 2023-2026. Barcelona, 3-9 August 2003.

Navarro- Tomás, T. (1964) La medida de la intensidad. *Boletín del Instituto de Filología de la Universidad de Chile* 16, pp. 231-235.

Quilis, A. (1971). Caracterización fonética del acento en español. *Travaux de Linguistique et de Littérature* 9, 53-72.

Quilis, A. (1981). Antonio Quilis , Fonética acústica de la lengua española. *Biblioteca Románica Hispánica*, Gredos, Madrid.