The phonetics and phonology of utterance-initial peaks in Manchego Peninsular Spanish wh-questions

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As is well-known in intonational research, proximity to prosodic boundaries is critical for interpreting turning point alignment; more specifically, initial peaks are particularly susceptible to late alignment when in contact with the utterance-initial boundary (cf. Nolan & Farrar 1999 for British English; Silverman & Pierrehumbert, 1990 for American English). As pointed out in Frota (1991; 2003), the variable nature of utterance-initial peak alignment creates difficulties from the perspective of intonational phonology. In fact, the results of Frota (2003) for Eurpoean Portuguese declarative statements provided evidence for two utterance-initial peak types: an accentual peak, consistently aligned relative to the first stressed syllable; and a phrasal peak, consistently aligned relative to the left-edge of the intonational phrase and within the limits of the first prosodic word. Arvaniti & Ladd (2009), however, in their analysis of utterance-initial peaks in wh-questions in Modern Greek, analyzed the gesture as L+H*. Contrary to Frota (2003), the possibility of multiple H accents at the left periphery was excluded. Specifically, Arvaniti & Ladd argued that when the wh-word begins with a stressed syllable, the L target is truncated, leading to a higher utterance-initial level, whereas the wh-peak is typically delayed in the absence of tonal crowding, appearing early in the postnuclear vowel. The current presentation extends the line of research on F0 variability in utterance-initial peaks to the realm of Spanish intonation, and specifically, to utterance-initial peaks exhibited in wh-question F0 contours produced by speakers of Manchego Peninsular Spanish.

In total, nine speakers of Manchego Peninsular Spanish (from Castile-La Mancha, Spain) participated in a computerized sentence reading task. All test sentences adhered to question word-verb-object order, target syllables contained CV syllable structure, and target consonants were sonorants or approximants. Utterance-initially, the number of unstressed syllables following the wh-word was fixed at one (e.g., *QUIEN noMIna mi noNOlogo* 'Who nominates my monologue'). A total of 52 wh-questions were uttered by each speaker, and speech data were recorded using a SONY HI-MD minidisc recorder and a Shure WH20 head-mounted microphone. Additionally, 104 lexically identical declarative statement and declarative question test sentences were prepared. Scaling and alignment measurements were taken for the H1 utterance-initial peak, and scaling data only were extracted for the F0 of IT, or the lowest non-spurious F0 point at the onset of the utterance. Results indicate that speakers produced wh-questions at a significantly higher IT level than declarative questions and statements, and the average magnitude of the utterance-initial rise (i.e., H1-IT) was 0.70ERB. The higher tonal value of wh-questions compared to other sentence types suggests a H tonal specification that operates at the left periphery (cf. Willis, 2006/7). In terms of alignment, H1 typically aligned within the bounds of the second stressed syllable (i.e., the stressed syllable of the content word following the wh-word). The ranges of variation of H1 alignment were quite large, though, and H1 alignment did not demonstrate segmental anchoring (Arvaniti et al., 1998; Dilley et al., 2005; Ladd et al., 2000), as may be expected for metrically strong (starred) tones. Clearly, though, the peak of the utterance-initial rise did not align with the stressed syllable of the wh-word, providing preliminary evidence for a phrasal peak analysis. Finally, these results have bearing on whether the utterance-initial rise represents the most prominent accent of the wh-question configuration or whether utterance-final gestures bear accentual prominence, as to be expected given research on wh-question intonation in other Western European languages (cf. Ladd, 2008).