

## **Where does the question begin?: Initial and final intonation cues in Peruvian Spanish interrogatives.**

Erin O'Rourke

University of Illinois at Urbana-Champaign

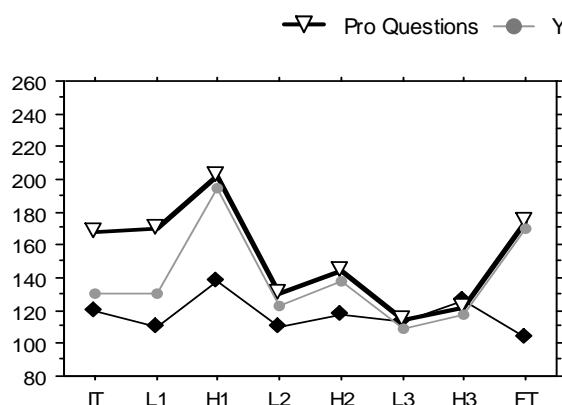
[eorourke@uiuc.edu](mailto:eorourke@uiuc.edu)

Question intonation in Spanish dialects has been characterized according to the direction of the final contour, whether there is a rise or a fall at the end of the utterance. Pronominal questions in Spanish are often described as ending in a fall, similar to declaratives, unless a rise is employed to express politeness or doubt, or a circumflex rise and fall are used to convey surprise (Navarro Tomás 1948:229-230; Quilis 1987, 1993). Questions that require a yes or no response may be realized with either a rise, a fall or circumflex contour, depending on the variety under consideration (Quilis 1987, 1993): Yes/No questions in Gran Canarian and Puerto Rican Spanish end with a circumflex contour, while Mexican Spanish, similar to Peninsular Spanish, ends with a rise. Sosa (1991, 1999, 2003) also demonstrates differing final contours in questions, depending on the variety of Peninsular or Latin American Spanish considered, the type of question (pronominal or yes/no) and the speech mode (read or spontaneous). In addition, Willis (2003, and forthcoming) finds a rise in read questions in Dominican Spanish, but both a rise and a fall are observed with semi-spontaneous speech. Willis notes that the pragmatic context and focus of the utterance may also play a role in the type of contour employed. Research on the intonation of Spanish interrogatives has also turned to examine other features. In particular, Prieto (2003) found higher initial peaks in pronominal and yes/no questions and imperatives, compared to statements in Peninsular Spanish. Willis (2003, and forthcoming) also examines upstepping of the nuclear pitch accent and tonal alignment in yes/no questions, as well as interrogative tonal range.

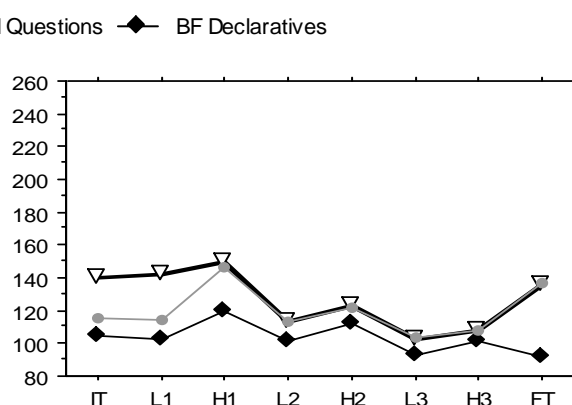
The present experiment examines the height of the fundamental frequency (F0) at both the beginning and end of the interrogative contour. Data have been analyzed from twenty Peruvian Spanish speakers, including five native Spanish speakers from Lima, seven native Spanish speakers from Cusco, five Quechua-Spanish simultaneous, balanced bilinguals and three native Quechua speakers who later learned Spanish (i.e., Quechua-dominant consecutive bilinguals). Contact with Quechua is considered as a possible influencing factor, since a separate instrumental analysis of Quechua yes/no questions demonstrates a final falling contour (O'Rourke, forthcoming). A total of 40 pronominal questions and 72 yes/no questions were analyzed per speaker. The findings reported here are based on the analysis of nearly 800 pronominal questions and 1400 yes/no questions produced in read speech mode. The analysis of Peruvian Spanish question intonation addresses three specific points in the utterance: the height of the F0 contour at the very beginning and end of the question (IT and FT), and also the height of the initial peak (H1). These questions are compared to the F0 height in broad focus declaratives as produced by the same set of speakers (O'Rourke, forthcoming)

The results demonstrate that in general the Lima and Cusco groups employ a rise in both yes/no and pronominal questions, as shown in Figure 1 and Figure 2. This finding coincides with the tendency reported in Escandell Vidal (1999) of employing a final rise in pronominal questions. Individual speakers also exhibit similar behavior. Although a final fall in yes/no questions may have been a possible outcome of contact between Quechua and Spanish, the Quechua-Spanish bilinguals and native Quechua speakers in this study appear to have maintained the feature of a fall in yes/no questions in Quechua, while acquiring a rise for this question type in Spanish. Also, both Lima and Cusco groups employed a significantly higher initial F0 peak (H1) in both question types as compared to broad focus declaratives. The current data set provides further evidence for the findings reported in Prieto (2003) for

Peninsular Spanish. These results indicate that interrogatives may be signaled at multiple points along the intonation contour, not just at the end. It is possible that the height of the initial peak is used to distinguish between a declarative and a question, whereas other pragmatic conditions may determine whether a question ends in a rise or a fall. More research is needed on other Spanish varieties to determine if this result may be a general pan-Spanish trait. Also, a gating perception study would help to indicate at what point from the beginning of an utterance a question can be distinguished, when compared to a declarative.



**Figure 1: Lima native Spanish speaker (L03)**  
Mean F0 height (Hz)



**Figure 2: Cusco native Spanish speaker (C03)**  
Mean F0 height (Hz)

## References

- Escandell Vidal, M. Victoria. 1999. Los enunciados interrogativos: Aspectos semánticos y pragmáticos. In *Gramática descriptiva de la lengua española*, edited by I. Bosque and V. Demonte. Madrid: Espasa.
- Navarro Tomás, Tomás. 1948. *Manual de pronunciación española*. 4th ed. New York: Hafner.
- O'Rourke, Erin. Forthcoming. Intonation and Language Contact: A Case Study of Two Varieties of Peruvian Spanish. Doctoral dissertation, University of Illinois at Urbana-Champaign.
- Prieto, Pilar. 2003. Scaling of H1 peaks in Spanish: Evidence from five sentence types. *Proceedings of the XVth International Congress of Phonetic Sciences*. Barcelona, August 3-9, 2003.
- Quilis, Antonio. 1987. Entonación Dialectal Hispánica. In *Actas del I Congreso Internacional sobre el español de América*. San Juan, Puerto Rico: Academia Puertorriqueña de la Lengua Española.
- . 1993. *Tratado de fonología y fonética españolas*. Madrid: Gredos.
- Sosa, Juan Manuel. 1991. Fonética y fonología de la entonación del español hispanoamericano. Doctoral dissertation, University of Massachusetts at Amherst.
- . 1999. *La entonación del español*. Madrid: Cátedra.
- . 2003. Wh-questions in Spanish: Meanings and Configuration Variability. *Catalan Journal of Linguistics* 2:229-247.
- Willis, Erik. 2003. The intonational system of Dominican Spanish: Findings and analysis. Doctoral dissertation, University of Illinois at Urbana-Champaign.

Willis, Erik W. Forthcoming. Dominican Spanish Absolute Interrogatives in Broad Focus. In *Laboratory Approaches to Spanish Phonology*, edited by T. Face. Berlin: Mouton de Gruyter.