

L2 Spanish speakers' perception of secondary cues in Y/N question and statement intonation

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English broad focus statements and yes-no (Y/N) questions differ not only in their intonation pattern but also in their word order. In Spanish, however, the only difference between these two types of utterances is the intonation pattern. The word order and number of words is exactly the same:

(1) *Rompió la mesa del comedor.*
(He broke the dining room table.)

(2) *¿Rompió la mesa del comedor?*
(Did he break the dining room table?)

English speakers acquiring Spanish must learn that in their L2 they rely solely on intonation patterns to distinguish these two types of utterances. While Y/N questions in both languages make use of a final rising contour, other intonation cues differ, in some cases, quite significantly. The specific focus of the current project is the initial part of the utterance, particularly initial boundary tone height and pre-nuclear peak height.

The research questions guiding this project are: 1) Can L2 Spanish (L1 English) listeners detect intonational phonetic differences not present in the equivalent structures of their L1? 2) Do advanced L2 speakers possess the form-meaning mapping of these structures? Spanish signals a Y/N question from the very beginning of the utterance by making use of a higher initial boundary tone as well as a higher pre-nuclear peak with respect to its comparable statement. This height difference is not used in English to signal the presence of Y/N questions and comparable statements (*English*: Pierrehumbert, 1980; Bartels, 1999; *Spanish*: Sosa, 1999; Hualde, 2005). The predictions for this study were: 1) participants would be more successful in the discrimination of acoustic differences rather than the identification of the form-meaning mapping; 2) the discrimination task would have a categorical outcome while the form-mapping meaning will show a greater variety of answers that would distribute along a continuum.

Ten advanced L2 Spanish (L1 English) speakers took part in the current study, which consisted of discrimination and identification tasks. The discrimination task was an AX task where participants heard 3 blocks of 15 pairs of utterances that were one of the following: *i*) identical, *ii*) different in pre-nuclear peak height or *iii*) different in initial boundary tone height. Half of these utterances had one manipulated parameter. Both declarative and interrogative bases were used for manipulation. The identification task used the same recordings from the previous task but in this case participants were explicitly asked whether they were hearing a statement or a question. In order to avoid interference from the primary cue, the final boundary tone of each utterance was masked by a barking dog sound.

Preliminary findings of both tasks are reported here. In the discrimination task, differences of peak height resulted in a 'different' response while differences in initial boundary tone did not have the same response, even in cases where two utterances had initial boundary tone differences of over 200 Hz. In the identification task, utterances with both bases were identified as questions or as statements when their prenuclear peak height was raised or lowered respectively. This means that if a statement base had its peak raised, it would be identified as a question. The same did not occur, however, when the initial boundary tone was raised or lowered even by several hundred hertz. When it comes to intonation not all phonetic parameters carry the same weight. Although the initial boundary tone is the first thing listeners hear, the cue for utterance type

seems to come from the pre-nuclear peak for these L2 listeners. The expected outcome was a difference between tasks, but what emerges from the findings thus far is that listeners are successful within each task based on the particular intonational feature that is being highlighted.

References

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