



Intonational and durational features of the Asturleonese substrate in Northwestern Peninsular Spanish

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Abstract

Several varieties of Spanish spoken in Northwestern Spain have an Asturleonese substrate. Such varieties show distinctive prosodic patterns that differ notably from those of Castilian Spanish (aka Central Peninsular Spanish), that is considered the prestige and standard variety of the language. This paper aims to describe the diachronic features influencing the prosody in León, a region where only vestigial rests of the Asturleonese substrate have persisted till the early 20th century. To this end, we have compiled a corpus comprising questions uttered by elderly informants from a rural area in León and by younger speakers in the major cities of the region (León, Zamora, Salamanca, and Palencia). The corpus has been annotated using Sp_ToBI.

Yes-no questions in our corpus exhibit falling intonational contours across all informants. Such contours are similar to those observed in the questions of Asturleonese speakers in Asturias, and differ clearly from the rising patterns of Castilian Spanish. Moreover, in the elderly speakers from the rural area we have documented a “durationally specified contour”, which shows a postlexical lengthening of the final syllable, that is also attested in some varieties of Asturian. In such contour modality is encoded not solely through F0 movement, but also through duration.

Index Terms: Sp_ToBI, Asturleonese, Language contact, Yes-no questions

1. Introduction

Prosody has been a relatively understudied aspect of the phonology of peripheral regions, such as the rural areas in the center of the Iberian Peninsula. This work aims to fill this gap by providing a detailed description of the intonation of yes-no questions in the region of León. In doing so, we will also argue that some of the prosodic features found in the variety of Spanish spoken in this region are due to the Asturleonese substrate. This will contribute to the improvement of the knowledge of what happens to intonation in situations of language contact that eventually lead to language shift, for which few case studies have been documented (for a review see [1], [2]).

Asturleonese was once spoken in a relatively big territory comprising the present-day regions of Asturias and León. While Asturleonese is still spoken in Asturias, in León it gradually disappeared when the region underwent a process of Castilianisation, i.e. a language shift that caused Castilian Spanish to substitute Asturleonese. Such process, that began during the late Middle Age, was completed in most parts of the province by the early 20th century.

1.1. Prosodic context

Yes-no questions in Peninsular Spanish have generally been characterised as having a rising intonation ([3]). This pattern has been documented for information-seeking yes-no questions in most Central and Southern varieties of the Iberian Peninsula ([4], [5]). For Castilian Spanish, the final rise of this tune has been labeled as L* H% ([5]).

Nevertheless, in the Northwestern part of the Iberian Peninsula (where three Romance languages are spoken: Spanish, Galician and Asturleonese), yes-no questions mostly display non-rising patterns. Among these tunes, one can distinguish two sub-groups: falling patterns (such as those transcribed in the Sp_ToBI system as H* L%, ¡H* L%, or H+L* L%), and rising-falling patterns (represented in the same system as L*+H L%, L*+H HL%, L+H* L%, L+H* HL%)([6]). For this specific study, the falling patterns are of significant importance, as they diverge from the rising pattern of Castilian Spanish and standard Spanish.

Yes-no questions have been predominantly described as having a falling pattern in the capitals of the provinces in the León region ([7]), in Palencia ([8]), in Asturias ([9], [10]), in Cantabria ([11], [12]), in Extremadura ([13], and in Galicia ([14], [15]). Figure 1 shows the main patterns of these territories.

There is much less literature concerning the role of duration in the prosody of the Romance varieties spoken in Northwestern Spain. One important exception is that the falling pattern H+L* L% in Central-Southern Asturias is associated with a lengthening of the final syllable of the utterance ([16], [17]). Specifically, Muñiz Cachón ([18]) asserts that duration and tonal range intertwined with the height of the first peak of the utterance play a relevant role in the differentiation between declarative and interrogative sentences, and suggests considering duration as a phonological component.

1.2. Objectives

On one side, this article will deal with yes-no questions in the Leonese Páramo (Figure 2), a rural region located in the southern part of the province of León, on a plateau at approximately 780 meters above sea level. It is a historical region that encompasses 21 municipalities. The estimated population is slightly over 15,000 inhabitants in an area of more than 850 square kilometers. The municipality of La Antigua, where the research has been conducted, has a total population of 351 inhabitants divided into five villages, with a density of 6.4 inhabitants per square kilometer. The municipality exhibits a significantly aged demographic, with an average age of 59 years.

On the other side, the information from rural speakers will be contrasted with that of four young informants and with higher education from the capitals of those provinces of Castile and León that exhibit descending intonation patterns: León,

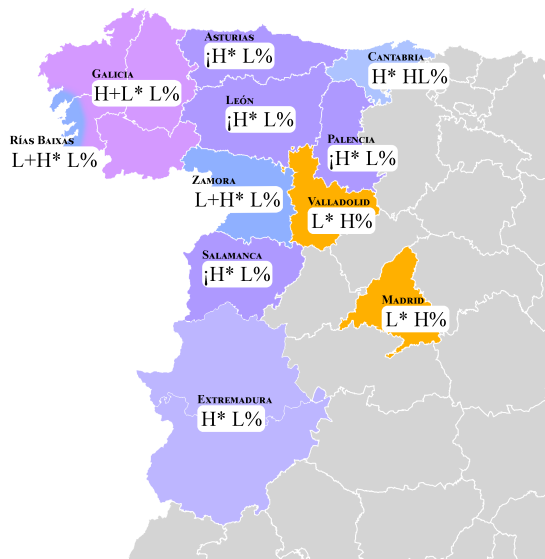


Figure 1: Primary nuclear configurations in each region according to the literature cited in this section [self-developed based on a Wikimedia Commons cartographic base].

Zamora, Salamanca, and Palencia; and with one informant from Valladolid, the *de facto* capital of Castile and León (Figure 3).

2. Methodology

For the rural area, a set of 74 yes-no questions from 11 informants in the Páramo region has been analysed. The speakers fall within an age range of 37 to 93 years, with only one informant being younger than 59 years; the average age is 71 years. Among the speakers, there are 3 men and 8 women, and none of them have higher education. The majority of the informants either currently work or have worked in the primary sector. Both the informants and their parents are natives of the municipality of La Antigua or Pozuelo del Páramo. They have spent most of their lives in the same municipality. The limited number of informants is justified by the low population of the area and the strict criteria imposed to define the characteristics of the surveyed individuals.

The data were collected through a Discourse Completion Task (DCT), a technique that involves a questionnaire presenting specific scenarios designed to elicit particular speech acts ([19]). The questionnaire used as a basis was derived from the form created by the Group of Prosody Studies of Pompeu Fabra University and Barcelona Autonomous University ([5]), which provides specific communicative situations for each type of statement.

For the urban areas, a set of 50 yes-no questions uttered by speakers from León, Zamora, Salamanca, Palencia, and Valladolid has been analysed. The questions were extracted from the AMPER corpus ([20]). Participants ranged from 20 to 36, and all had completed higher education, there were 4 women and 1 man (from Salamanca).

Two distinct data collection methods were employed for urban young participants. On one side, a Discourse Completion Task and, on the other hand, a Map Task tool, that enables a more spontaneous speech style ([21]), as it involves a collabo-

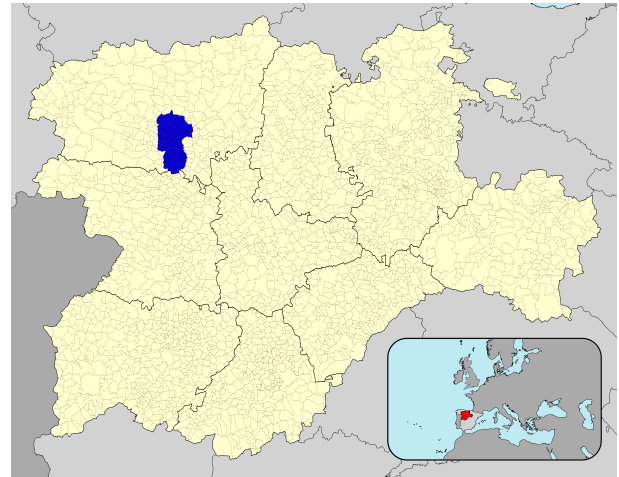


Figure 2: Geographic location of the Leonese Páramo in Castile and León, author's own.



Figure 3: Geographic location of the provinces of León, Zamora, Salamanca, Palencia and Valladolid in Castile and León; author's own.

orative task between two speakers who are provided with similar maps and are required to ask each other questions to reach a point indicated by the investigator ([22]).

All sentences from both participant groups were annotated in Praat ([23]) using an automatic intonation labeler ([24]), followed by a manual review. The annotated data were exported and subjected to statistical analysis using R and Microsoft Excel.

3. Results

3.1. Rural speakers

After the analysis and labeling of the 74 yes-no questions uttered by the rural participants, a total of five distinct nuclear configurations have been identified. Based on their distribution (Table 1), it can be asserted that there is a predominant nuclear configuration ($¡H^* L\%$) and three nuclear configurations that appear with some frequency ($L+H^* HL\%$, $L^* H\%$, and $H+L^* L\%$), while the $L+H^* ¡HL\%$ configuration shows rare occurrence.

Table 1: *Distribution of nuclear configurations for rural speakers*

Nuclear configuration	Absolute frequency	Percentage
¡H* L%	43	58,11%
L+H* HL%	23	31,08%
H+L* L%	5	6,76%
L+H* ¡HL%	2	2,71%
L* H%	1	1,35%

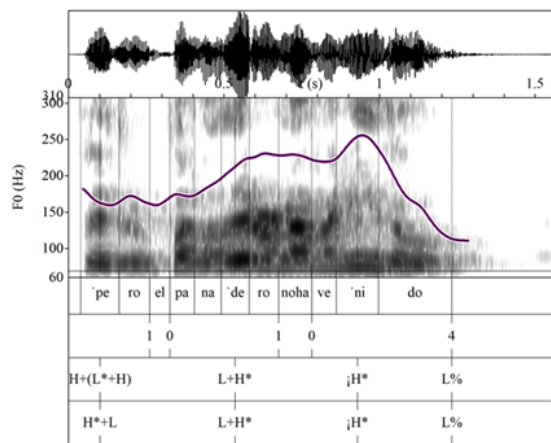


Figure 4: *Utterance labeled as ¡H* L%.*

The main nuclear configuration, ¡H* L%, is present in 58,11% of the sentences. This contour features a slight rise in F0 at the beginning of the phrase, maintaining a high plateau until the final stressed syllable, which exhibits a higher F0 and is therefore labeled with an extra-high tone (¡H*). Subsequently, a continuous fall occurs in the post-tonic syllables (L%). Figure 4 provides an example of this nuclear configuration. It illustrates the sentence “¿Pero el panadero no ha venido?” (But hasn’t the baker come?), a non-neutral question produced by a 79-year-old male informant. It can be observed that a high plateau is reached and sustained for three syllables -despite a slight decline- followed by an extra-high tone on the nuclear-stressed syllable “ni” with the tonal peak at the centre of the same syllable. This is followed by a tonal descent of F0 until the end of the statement.

Regarding duration, the data reveal an average duration of 0,12 seconds for medial syllables and 0,32 seconds for final syllables. Thus, the average duration ratio stands at 2,7; meaning that, on average, final syllables last 2,7 times longer than the medial syllables within the same utterance.

If the data are classified according to the different patterns, it can be observed that the duration of final syllables compared to medial ones (the mean duration for each of the non-final syllables of each sentence) is particularly notable for the falling pattern (H+L* L%), as shown in Figure 5.

The pattern with the least lengthening is ¡H* L%. Next is the pattern L+H* HL%, which includes a bitonal boundary and, consequently, it is consistent for it to exhibit greater lengthening to accommodate two tonal targets in the final syllables. Finally, the pattern H+L* L% shows a significantly higher ratio than

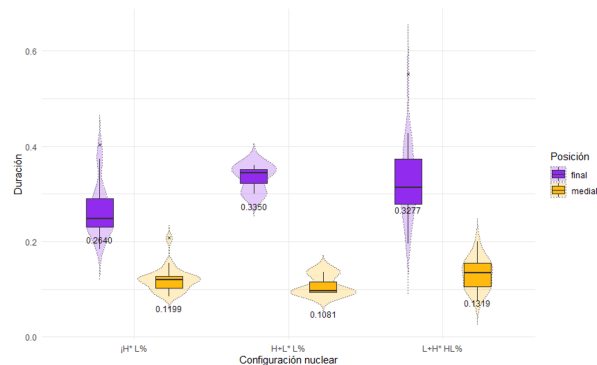


Figure 5: *Relation between final and medial duration according to the nuclear configuration for yes-no questions with unstressed final syllables.*

Table 2: *Distribution of nuclear configurations for urban speakers*

Nuclear configuration	Absolute frequency	Percentage
¡H* L%	24	48%
L+H* L%	13	26%
L* H%	12	24%
L+H* LH%	1	2%

the rest of the patterns. This increased lengthening could stem from the need to codify the interrogative nature of the utterance through parameters beyond F0 movement, such as duration, like it’s been argued for the same pattern in neighbouring Asturian varieties ([18], ([16]).

3.2. Urban speakers

Four distinct nuclear configurations have been identified for the questions uttered by urban speakers: ¡H* L%, L+H* L%, L* H%, and L+H* LH% (Table 2). The first pattern (¡H* L%) is prevalent in León and Salamanca, while L+H* L% prevails in Zamora and Palencia. The Castilian (and standard) Spanish rising pattern L* H% is only prevalent for the speaker from Valladolid.

Among these data, The pattern L+H* LH% that was produced by the speaker in León is particularly interesting, since it has been described as a hybrid pattern ([25]). It presents a tonal configuration that combines elements of the traditional Asturleonese rising-falling contour (L+H* L%) and the Castilian standard rising contour L* H%. As it can be seen in Figure 6, the nuclear configuration shows a stressed syllable followed by a tone with a fall-rise. This final rise is characteristic of the standard pattern and is not as expected concerning the rest of the nuclear configuration, which would be L+H* L%.

Of the total set of utterances produced by urban speakers, 26% present a rising boundary tone. As shown in Figure 7, the distribution of boundary tones differs according to the task carried out. The difference between nuclear configurations according to the data collection task is statistically significant: $\chi^2(3, 50) = 11.355, p < .001$. This suggests that rising contours are more present in recordings with a lower degree of spontaneity.

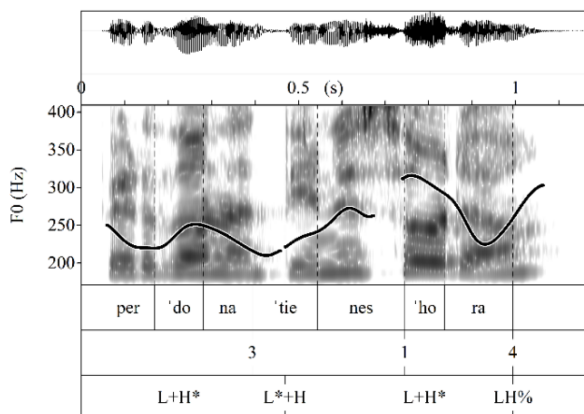


Figure 6: Boundary tones by task expressed in percentage.

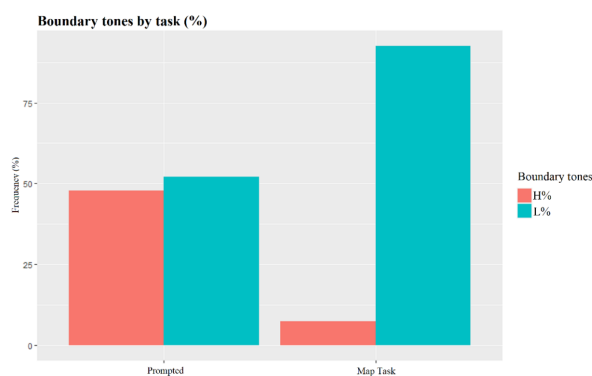


Figure 7: Interrogative utterance produced by the León informant showing a hybrid nuclear configuration (L+H* LH%).

4. Conclusions

The analysis of the distribution of the different tunes suggests several different conclusions.

On one hand, the fact that Spanish rural varieties spoken in the León region share the falling patterns documented in present-day Asturian varieties of Asturleonese and in Galician suggests that when the area was Castilianised, the prosody of the Asturleonese substrate survived the language shift and was handed down to Leonese Spanish. In general terms, this suggests that prosody is a fairly resistant element to linguistic shift, and suprasegmental features show greater resistance to linguistic change than other features that might be more noticeable at first glance, such as vocabulary or segmental phonetic traits. This conclusion is in line with the studies by Baltazani on Cretan Greek and Roseano on Algerese Catalan, who show that superstrate or substrate languages can transmit their prosodic features to the language that survives the contact situation ([1], [2]).

On the other hand, from a more synchronic perspective, the differences between rural and urban speakers and also between task types suggest that there might be an incipient linguistic change that affects the prosody of yes-no questions. Old rural speakers seem to be more conservative and only show falling patterns. For young urban speakers, the prosodic situ-

ation seems to be more complex: while they largely retain traditional falling patterns, they also display the rising pattern of standard Spanish (L* H%) and a hybrid rising pattern (L+H* LH%). Moreover, the rising patterns are more frequent in the data obtained through methods that favour a lower degree of spontaneity, which would be cohesive that the introduction of the standard Spanish tune works like a change from above. Interestingly, Elvira-García ([25]), when discussing data from León, agrees in that "the hybrid pattern is reserved for more formal or guided contexts, whereas the traditional pattern appears in more spontaneous tasks". Something similar has also been observed in the Fala Extremeña, another Romance variety in contact with standard Spanish, where the traditional falling intonation prevails for conversational speech, while rising patterns are prevalent in read speech ([13]).

Finally, it seems that the Asturleonese substrate has not only handed down to León Spanish its intonational features, but also its durational features. As we have seen, the pattern that shows the greatest lengthening for the final syllable compared to the medial syllable is H+L* L% as produced by rural speakers. It is noteworthy that this post-lexical lengthening is also documented in the falling interrogatives of the Asturian from Mieres ([18], [26]), and the literature on Central-Southern Asturian suggests that sentence modality is conveyed not only through F0 movement but also through duration, suggesting a phonological function for post-lexical duration. If the phonological status of this post-lexical lengthening characterising the all-falling pattern were confirmed through perceptual tests, it would be considered as one of what Hayes and Lahiri ([27]) defined as durationally specified contours: prosodic patterns characterised by both a specific intonation contour and a concrete duration. Typologically, durationally specified contours are relatively uncommon, as, apart from the case of chanted vocatives ([27], [28]), they have only been documented for Western Greenlandic ([29]) and Southern Valencian ([30]).

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