

## Linguistic Outcomes of Language Contact Between Quechua and Spanish in Argentina Presenters: Daniel Abrill, Sandra O'Connell, Andrea Mase | Research Mentor: Antje Muntendam

### Introduction

Combined, around ten million people speak the various varieties of the Quechua language, making it one of the most spoken indigenous languages in the modern day (Coronel-Molina & Rodríguez-Mondoñedo, 2012). Promoted as a lingua franca during the rule of the Inca Empire, Quechua speakers can be found across the Andes Mountains, and communities of Quechua speakers can still be found today in Colombia, Ecuador, Peru, Bolivia, Chile, and Argentina (Adelaar & Muysken 2004).

However, due to five hundred years of contact with the Spanish language because of the Spanish conquests in the region, many modern Quechua speakers are bilingual in both Quechua and Spanish, with the language borrowing words and grammar rules from the Spanish language. A notable influence Spanish has had is on Quechua's use of intonation (Muntendam, 2015; O'Rourke, 2005).

When one asks a yes/no question in Spanish, they can use a rising intonation, where they go from a low pitch to a high pitch, to mark their utterance as inquisitive. However, Quechua uses the suffix -chu to distinguish questions from statements and often ends yes/no questions in a falling intonation, going from a high pitch to a low pitch (O'Rourke, 2005). So, the dilemma that Quechua-Spanish bilinguals often face is determining which linguistic strategies to employ.

While most studies on this topic focus on the Peruvian variant, our research intends to focus on the variety spoken around the Argentinian city of Santiago del Estero, also known as Quichua. More specifically, this project seeks to see what Spanish intonation is used by Quichua-Spanish speaking bilinguals compared to Spanish speaking monolinguals in Santiago del Estero when asking yes/no questions. Through our research, we hope to be able to provide useful data for further studies of bilingualism and language evolution.

### Methods

The participants consist of 50 Quichua-Spanish bilinguals and 15 Spanish monolinguals living in Argentina. They are all adults, and many have limited literacy in either Quichua and/or Spanish.

Participants were asked to perform multiple tasks. The first was a Bilingual Language Profile questionnaire (Birdsong et al., 2012) used to evaluate each language strength. Quichua-Spanish bilinguals were given questions about their biographical information as well as language history, use, proficiency and attitudes. Spanish monolinguals completed a shorter questionnaire about their age, gender, level of education, and knowledge of other languages.

After completing the Bilingual Language Profile, participants were then asked to perform Task 1 in Spanish and Quichua. Task 1 consisted of question-and-answer cards with objects in different colors, eliciting yes/no questions, wh-questions and statements.

The tasks were recorded and then inputted into the Praat software (Boersma & Weenink, 2024) where individual sentences were split up between participants. As research assistants, we first transcribed the phrases and then split the last word into syllables. We later analyzed the pitch accent of the last stressed syllable of each utterance and the boundary tone. Through Praat's oscillogram and spectrogram we were able to more easily analyze the intonation.

### Results

- In the final syllable, we have noted that the H%, or the boundary tone with a rapidly increasing pitch, was the most frequently found among both bilinguals and monolinguals.
- However, one difference would be that there are more occurrences of L+H\* pitch accents among the bilingual speakers, which may be due to Quechuan influence. Meanwhile, monolinguals tend to use H+L\* pitch accents regularly.
- Despite the differences in pitch accents, the commonality among both bilingual and monolingual speakers would be that most phrases end with a sharp rise at the boundary tone.

### Discussion and Conclusion

- The common use of L+H\* among the bilinguals may be an impact from Quechua but the boundary tones end with a high intonation, as in monolingual Spanish.
- According to O'Rourke (2007), there is a commonality of low boundary tones in Quechua. In our data, we did not find an influence from Quechua for the boundary tones, but mainly for the nuclear pitch accents.
- Our findings for monolingual Spanish speakers are similar to the Spanish spoken in the region of Tucumán where yes/no questions have a "low F0 trajectory...followed by a high boundary tone" (Terán & Ortega-Llebaria, 2016, p. 484).
- Additionally, O'Rourke's (2005) study of yes-no questions among Spanish monolinguals from Lima and Spanish-Quechua bilinguals and Quechua monolinguals from Cuzco is in alignment with our results due to finding a rise in the boundary tones, and not a fall.
- Our findings prove to be beneficial for assisting with new discoveries in the linguistics field relating to how languages may be impacted by contact.

### References & Acknowledgements

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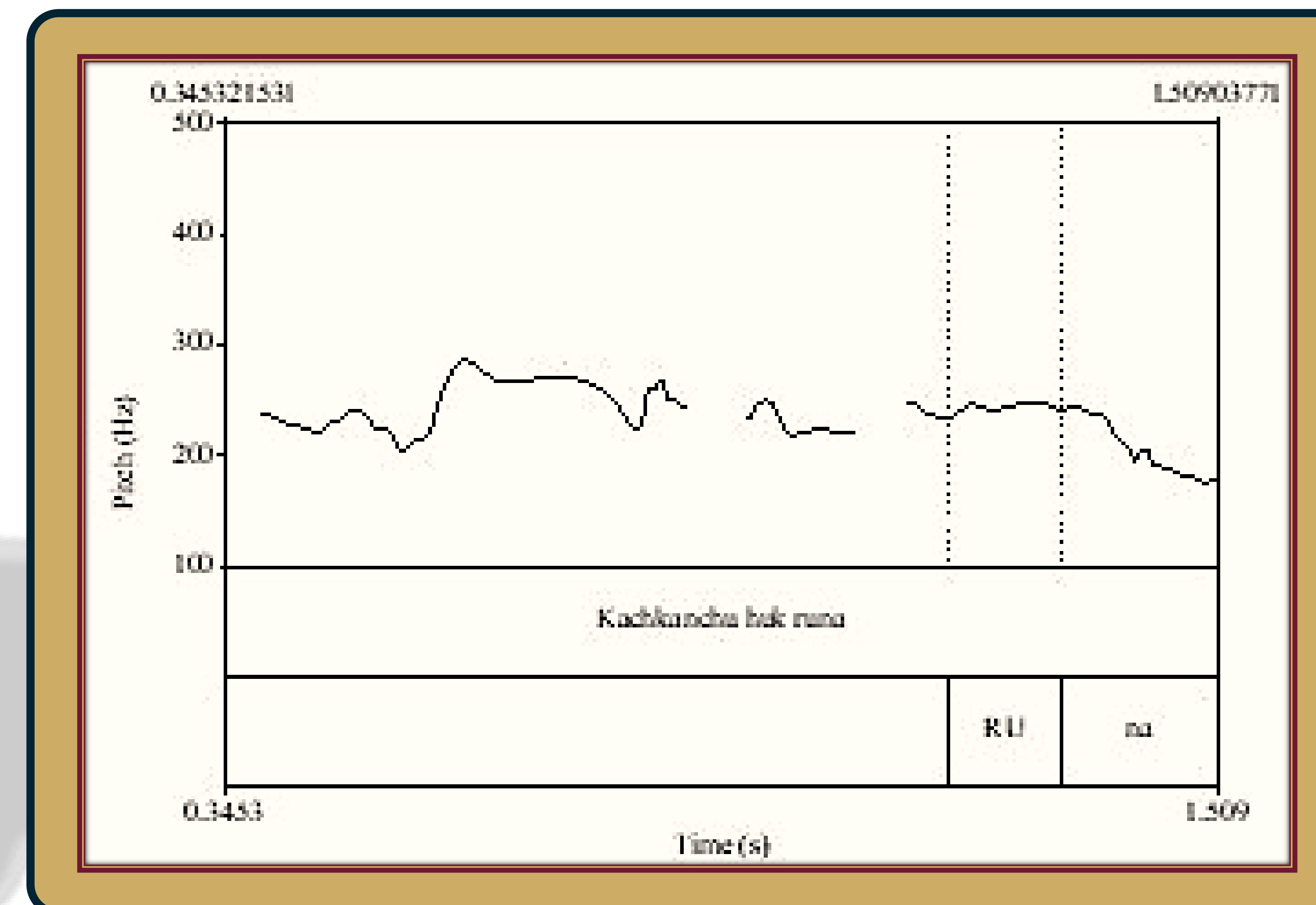


Figure 1. Spectrogram from Praat audio sample from Quechua-Spanish bilingual

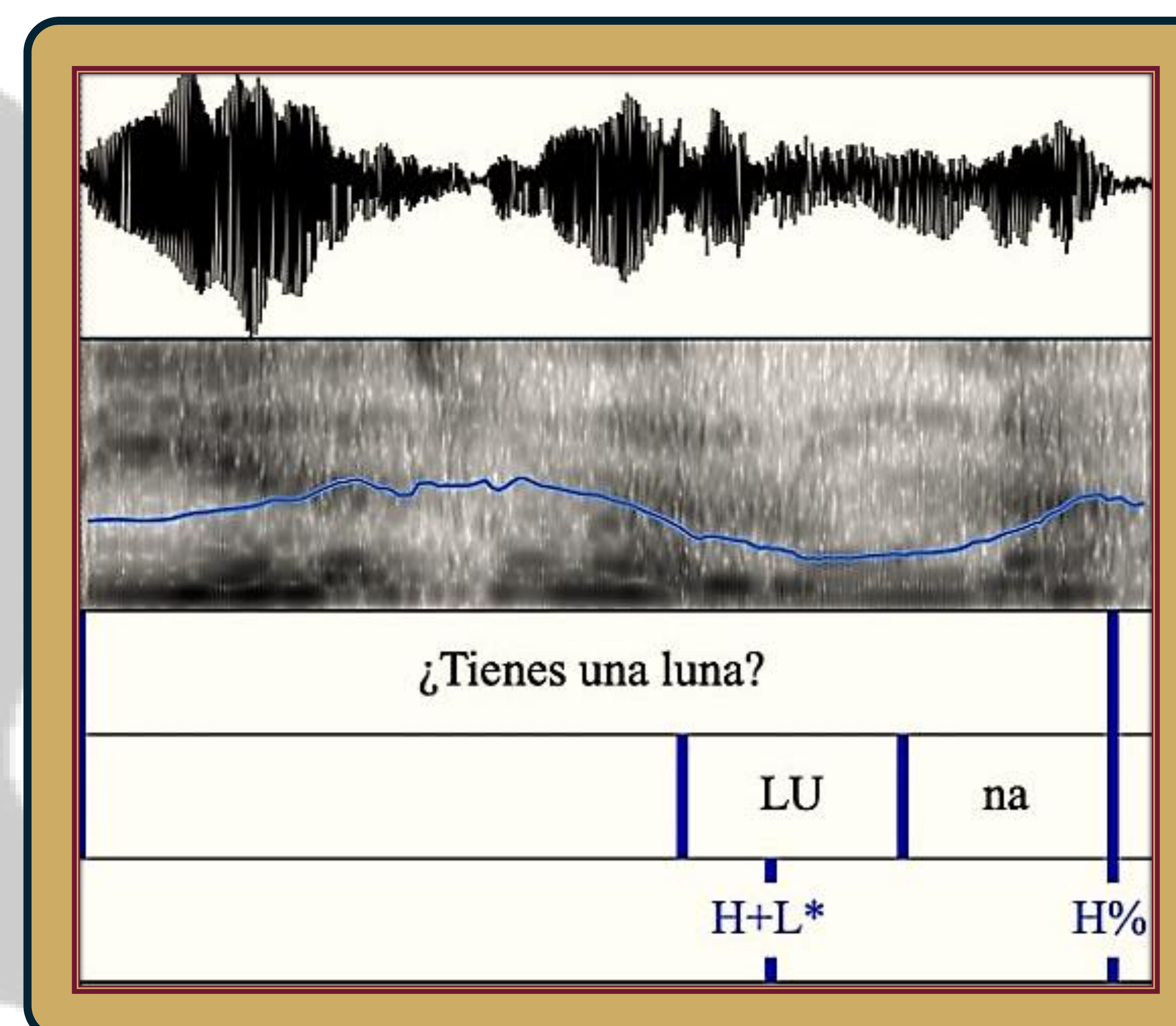


Figure 2. Praat audio sample that includes Spectrogram and Oscillogram from Spanish monolingual