NWAV 52

Coda Liquids in Isla Margarita

Nikolai Andrés Schwarz-Acosta
University of California, Berkeley

Introduction

Liquid Variation

Liquid phonemes: /r/, /l/, /ɾ/

/r/ and /ɾ/ only maintain contrast in intervocalic positions and with /l/ as well in onset

Examples of Liquid Variation:

Tap and trill variation in Veracruz Mexico (Bradley & Willis, 2012):

- Tap /ɾ/ mostly realized as **approximant [ɾ̞]**
- "**Barely visible**" taps transcribed as [$^{(ɾ)}$]; characterized as a **slight reduction in the amplitude of F3 and F4**
- Completed **deleted taps**
- Trills sometimes realized as **approximants or fricatives** ([ɹ], [ɻ], [ɻ̞], [ɻ̝]) (also Solé, 2002)
- **tap, trill/approximant sequences** ([ɾɹ], [ɾɻ̞]) (also Kouznetsov and Pamies 2008, 2011)
- or, regular trills sometimes with **r-coloring** ([rɹ], [r]) (also Recasens and Espinosa, 2007 & Henriksen and Willis, 2010)

Liquid Variation

Coda Liquids in Puerto Rican Spanish (Simonet et al., 2008)

- Tap /r/ lateralizes in coda
- Showed that these two are acoustically different: phoneme /r/ that has been lateralized has a lower **F3 trajectory.**

Laterals in Central Australian Languages (Tabain et al., 2016)

- Examined the phonetic realizations of different laterals across languages
- Found **duration** differences across the 4 laterals
- Found **differences in F1, F2, F3, F4** across the 4 laterals
- They propose that using **CoG and SD** robustly identifies the laterals that differ in place of articulation

Liquid Variation (Venezuela)

Though there has not been any acoustic investigations of liquids in Venezuelan Spanish, there have been some impressionistic accounts of liquid variation (Obediente, 1998; cited by Orozco & Díaz-Campos, 2016)

- Assibilation of /r/; /r/ → [ř]
  - Andes
- Elision of coda /ɾ/; /ɾ/ → ø
  - Lowlands
- Neutralization of /r/ and /l/ (in coda position)
  - Lowlands

The Present Study

The present study examines the phonetic properties of one speaker's liquids from Isla Margarita in Venezuela.

The study aims to be a starting point of understanding how to quantify and describe liquid variation.

Why Isla Margarita?

Isla Margarita has not been looked at in the linguistics literature. Only a few studies on Venezuelan acoustic phonetics (Cole et al., 2021; Díaz-Campos et al., 2023; Díaz-Campos & Wheeler, 2021; Lain, 2010)

It offers an interesting point of interest for contact effects. A hub for fishermen that travel to various locations in the Caribbean

Often not represented in reviews on Venezuelan dialectology.

Methods

Methodology

Sociolinguistic interview over WhatsApp.

Questions were sent via audio message and the participant was asked to respond to the questions in a quiet room via audio message

The participant was a man in his 50s living on Isla Margarita who has lived there his whole life.

Interviews were transcribed by the interviewer, forced aligned using the Montreal Forced Aligner (McAuliffe et al., 2017), and then coda liquids were hand checked by the interviewer to analyze.

Acoustic data was extracted using praat-parselmouth (Jadoul et al., 2018; Boersma & Weenink, 2024) Coded impressionistically, but guided by acoustic data.

Results

Observed Variation

Taps vary a lot:

- Canonical Tap
- Lateral
- Approximant
- Elision
- Trill
- Assibilation

Laterals vary a lot less:

- Lateral
- Rhotacized
- Tap

Frequency

	Tap	Trill	Appr.	Lateral	Assib.	Elision	Total
/l/	9	0	0	57	1	1	68
/r/	66	9	13	17	9	20	134
Total	75	9	13	74	10	21	202

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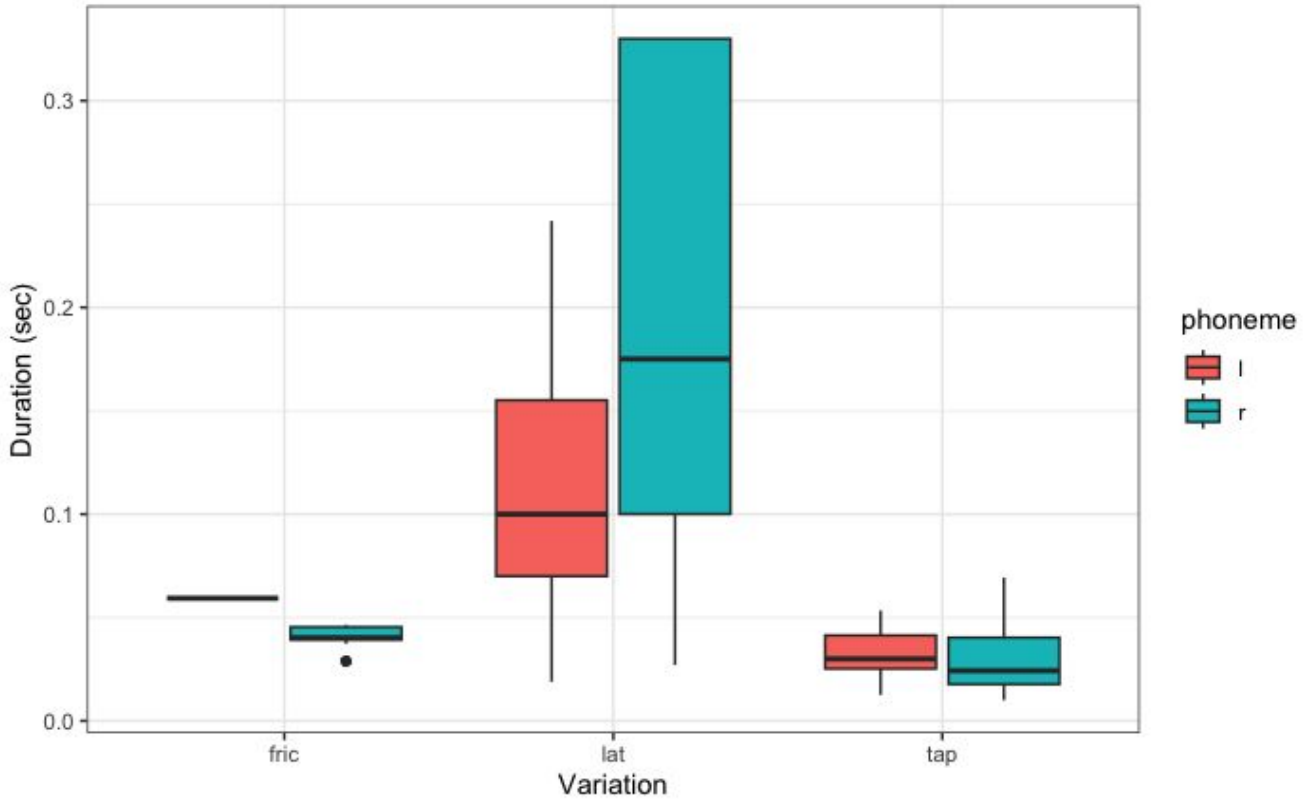
Duration



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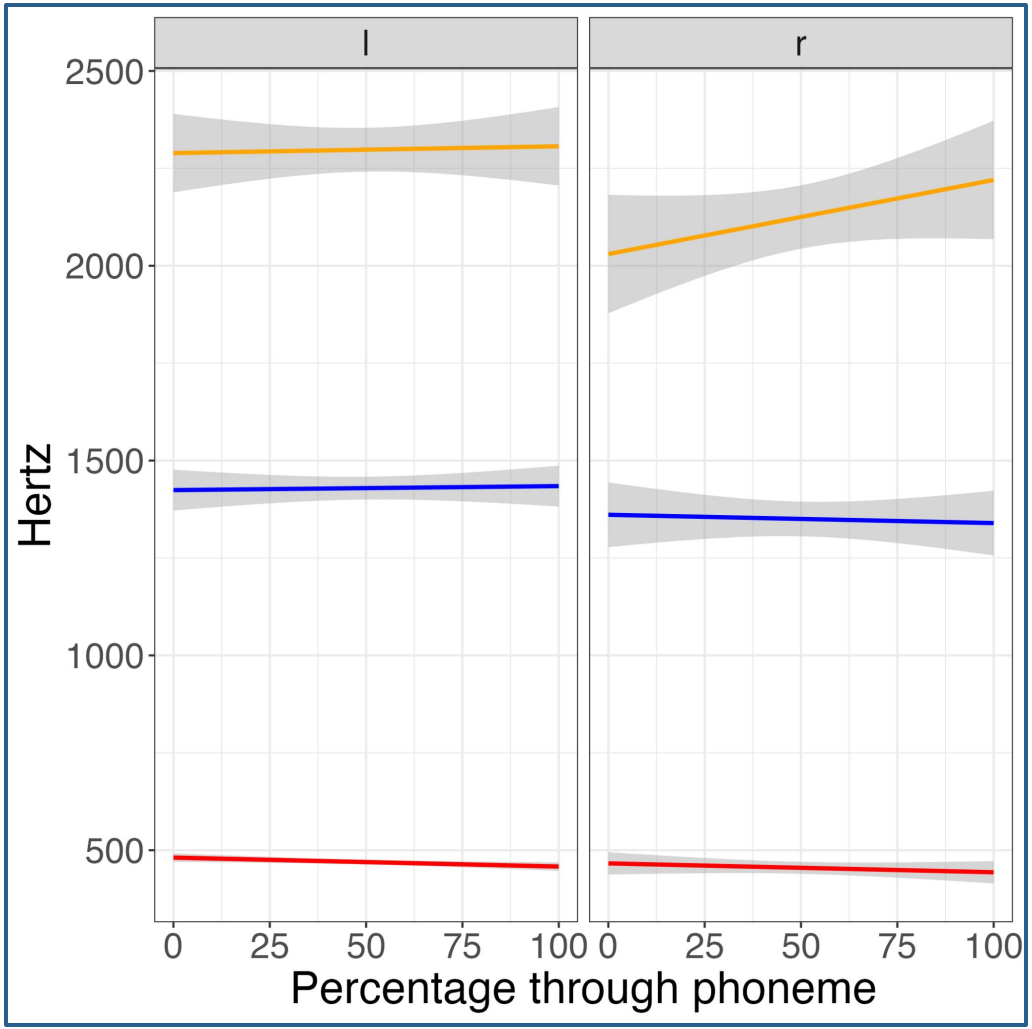
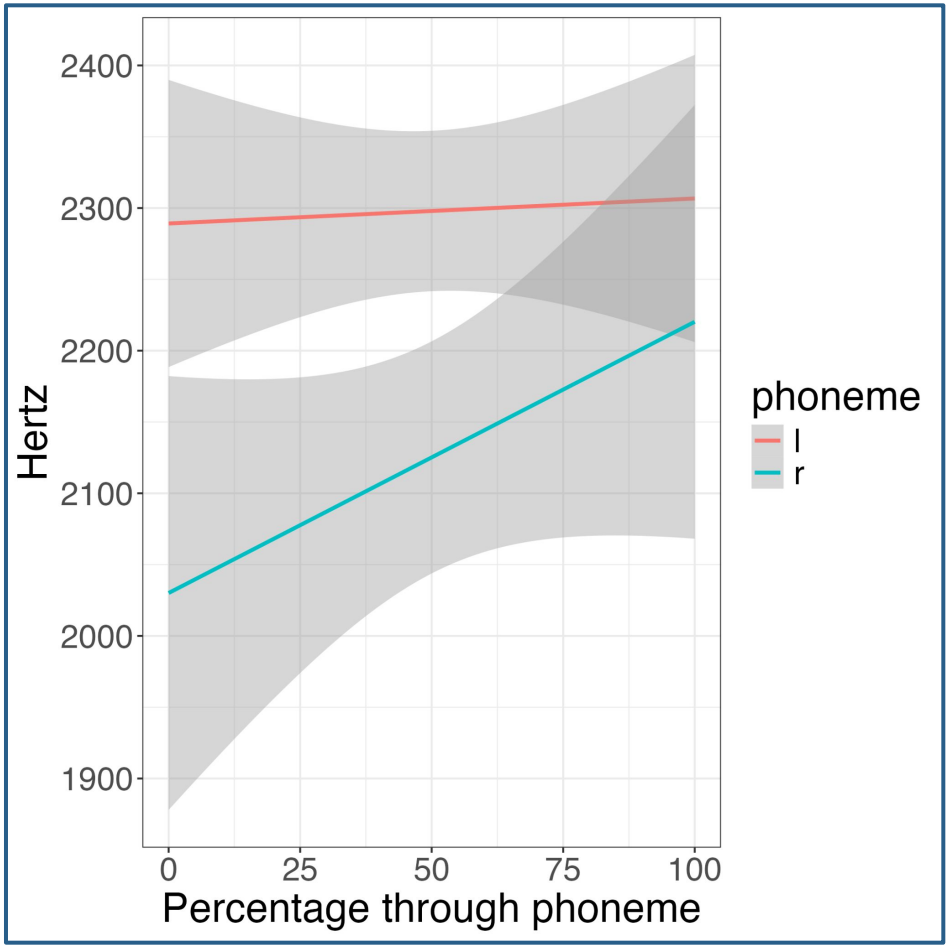
Formant Trajectories



F3 Trajectories



Linear Model: F3 ~ phoneme * percent

	Estimate	Std Error	t value	Pr(>|t|)
Intercept	2289.17	53.56	42.739	<2e-16***
phoneme r	-259.10	89.28	-2.902	0.00401**
percent	17.53	88.86	0.197	0.84379
phoneme r:percent	172.66	149.88	1.152	0.25032

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Conclusions & Future

Speakers may vary pretty freely between tap and lateral with coda liquids, especially with /r/.

F3 and durational values are not identical in lateralized taps and lateral approximants.

It is unclear about the development of neutralization in this area, but they exhibit different acoustic patterns as other Spanish varieties with neutralization (e.g. Puerto Rican Spanish).

More research needs to be done regarding this variety and other related varieties.

Currently collecting data on more Venezuelan Speakers and using a wordlist task to control for prosodic influences, and to get higher quality acoustic data.

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