

Variable neutralization of the tap/trill contrast in a bilingual Spanish-Creole community

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Structure of the presentation

- ▶ **Background**

 - The Archipelago of San Andres

 - Three Linguistics varieties in Contact

- ▶ **This Study**

- ▶ **Results**

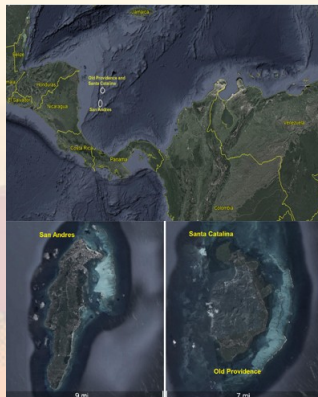
 - Segmental Duration in the Rhotics of the Archipelago

 - Non-Vibrant Rhotics in Raizal Spanish Across Generations

- ▶ **Discussion and Conclusion**

The Archipelago of San Andres, Colombia

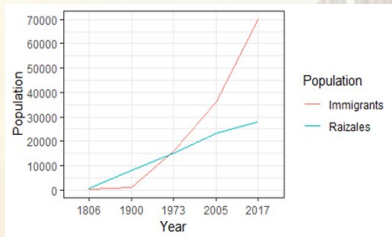
The Archipelago in the Western Caribbean



1. The Archipelago of San Andres, Colombia, home to an English-based Creole, known as Islander.
2. Two main languages in contact: Colombian Spanish, spoken by Catholic, monolingual Spanish speakers and Islander Creole, spoken by protestant, Afro-Caribbean, bilingual speakers (Islander and Spanish).
3. Ethnonym of “Raizales”.

The Archipelago of San Andres, Colombia

► Population



- Language use: Virtually, all Raizales are bilinguals in Islander and Spanish.
- Education: Spanish is the language of instruction in public schools. There are no university institutions in the island.
- Language policies: Both Languages are co-official in the islands as per the Colombian Constitution and other language Laws (Law 43, 1993; Law 1381, 2010).

Three Linguistic Varieties in Contact

Islander Creole

(Raizal Creole henceforth): Language derived from the Twi African Languages and British English. Population, migrated to the islands from Jamaica, and thus, it is mainly, an offshoot of Jamaican Creole.

Raizal Spanish (The bilingual variety)

The bilingual Spanish variety emerged from contact and spoken by three generations of Raizales (R1, R2, R3).

Continental Spanish (The monolingual variety)

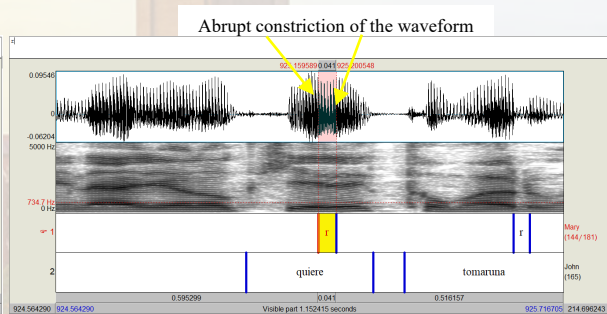
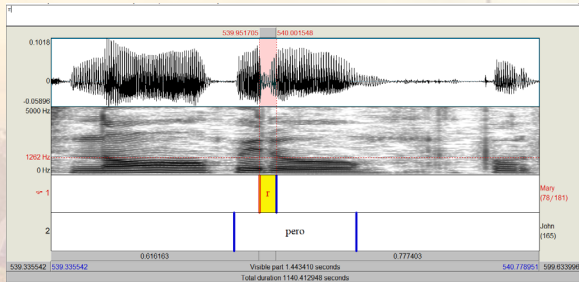
The monolingual Spanish variety spoken by immigrants from mainland Colombia, particularly from the Caribbean coast, who have remained in the islands.



This Study

What?

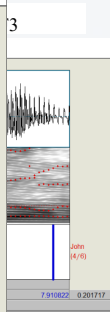
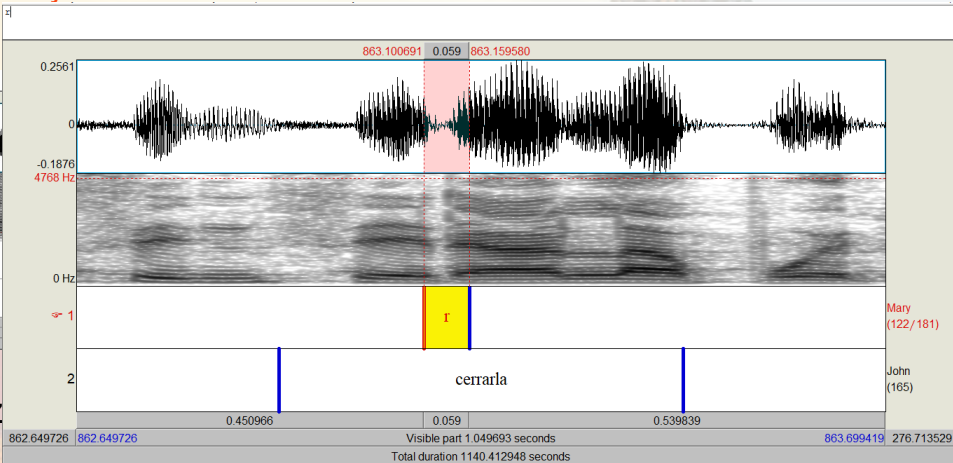
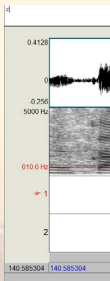
Compare the segmental duration of non-vibrant rhotics (zero-occlusion) in their contrastive environment (i.e. intervocalic position) in the three linguistic varieties under study by means of acoustic, linguistic and social predictors.



Raizal Spanish --- Tap with a normative lingual closure (left). Tap displaying no tongue vibration (right)

This Study

What?



Raiz

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This Study

Why?

Outcome of contact across generations.

How?

By conducting a cross-linguistic comparison across three generations of Raizales (R1, R2, R3).

Sample

From 1450 non-vibrant rhotic tokens, 691 Praat-annotated intervocalic tokens were sampled from 30 Raizal Spanish informants. Data collected by means of sociolinguistic interviews and other elicitation tasks. 328 tokens for Raizal Creole were sampled.

Generation	Age Median	Island	Sex
1 st Generation	72	San Andres	3 females, 2 males
2 nd Generation	46	San Andres	3 females, 2 males
3 rd Generation	28	San Andres	2 females, 3 males
1 st Generation	61.5	Old Providence	3 females, 2 males
2 nd Generation	43	Old Providence	3 females, 2 males
3 rd Generation	26	Old Providence	2 females, 3 males

64/150 intervocalic tokens from 8 Continental Spanish Informants

This Study: Linguistic predictors

Word context: *Only applied to measuring the overall segmental duration between varieties*

Complex: consonant clusters in syllable onsets (tres, libro)

Final: word-final positions (mar, vivir)

Initial: word-initial positions (Roma, rey)

Intervocalic: word-medial, intervocalic positions (arriba, perro)

Medial: word-medial, preconsonantal positions (arma, carne)

Word Stress: *Applied as the main linguistic predictor of the neutralization of the tap/trill contrast in the bilingual and monolingual Spanish varieties.*

Pre-tonic: rhotic located in pre-tonic word position (re.'ga.lo, ro.'sa.rio)

Tonic: rhotic located in tonic word position (a.'ro.ma, 'rá.pi.do)

Post-tonic: rhotic located in post-tonic word position ('ca.rro, 'ca.ro, 'bu.rro, ro.'sa.rio)

Research Questions

Crosslinguistic comparison

R1. How different are the three varieties of the Archipelago in terms of segmental duration? How do they compare based on word context and stress?

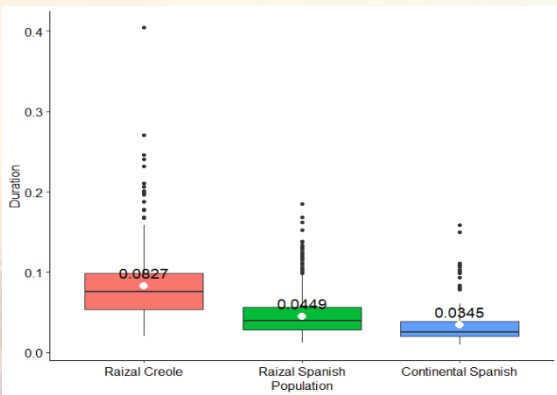
Intervocalic, Word-Medial Tap/Trill Comparison between Spanish varieties

R2. Is there a difference in segmental duration between the bilingual Raizal Spanish and monolingual Continental Spanish?

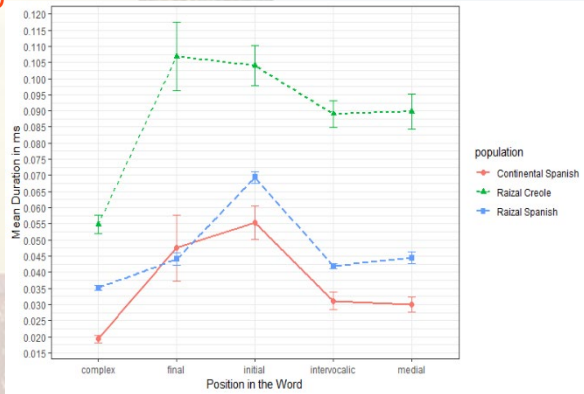
If so:

- Are there any generation of Raizal Spanish speakers that neutralize the tap/trill contrast based on word stress?
- Is non-vibrant rhotic variation spreading in the direction of Continental Spanish motivated by new generation of speakers?

Segmental Duration in the Rhotics of the Archipelago

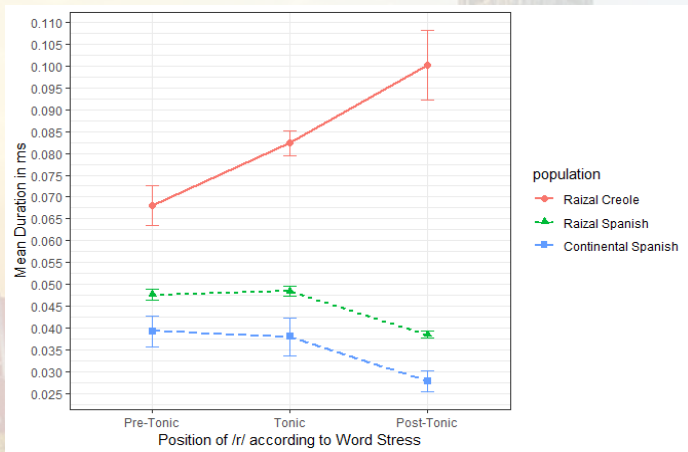


Left: Overall segmental duration across varieties of the Archipelago



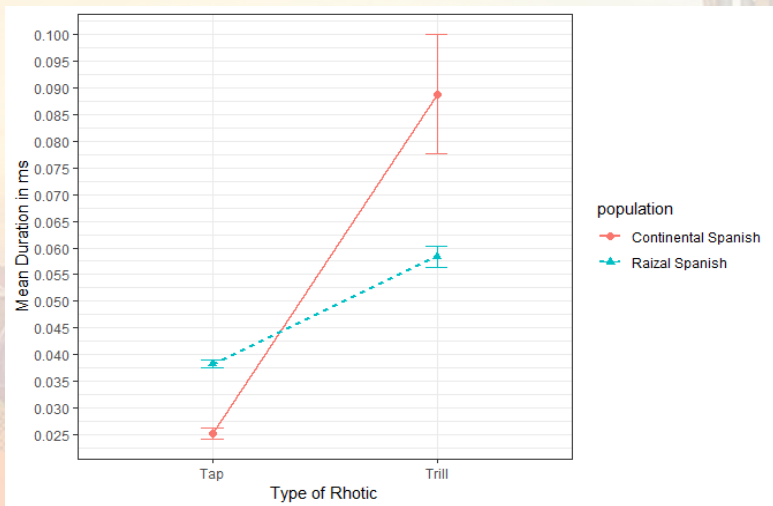
Right: Segmental duration according to word context across varieties of the Archipelago

Word Stress



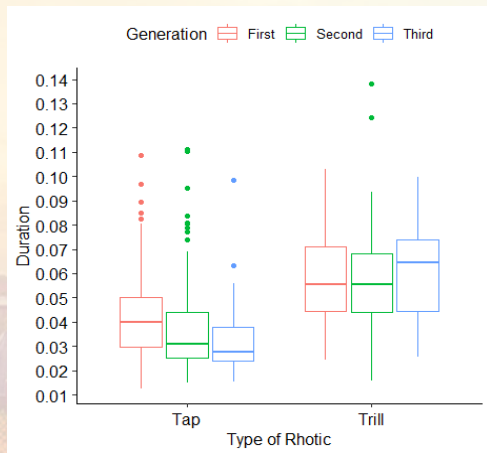
Differences in word stress and overall segmental duration across varieties of the Archipelago

Raizal Spanish and Continental Spanish compared

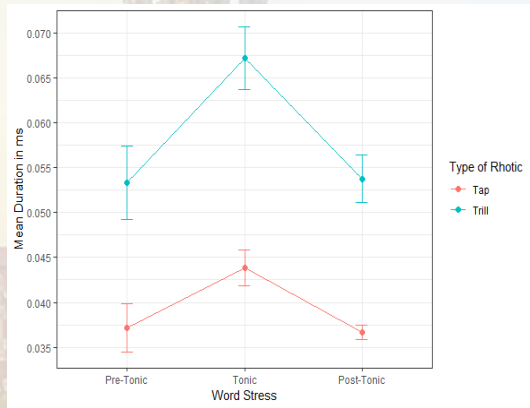


- Note the clear boundary separation in Continental Spanish.
- Contrast seem less clear in Raizal Spanish.

Non-Vibrant Rhotics in Raizal Spanish Across Generations



Left: Segmental duration across generations



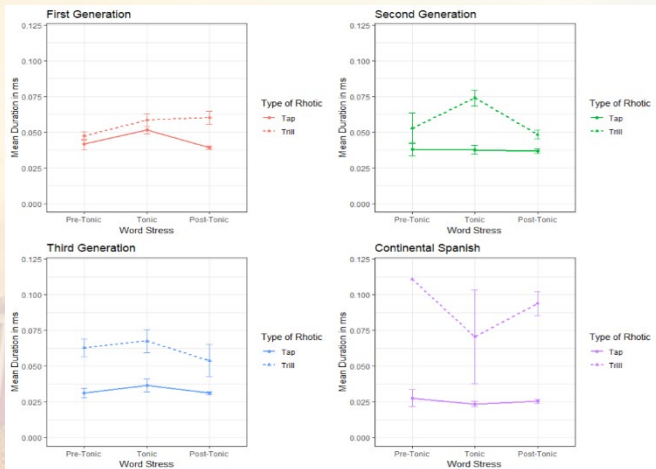
Right: Overall segmental duration across word stress contexts

The role of word stress

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
Type of Rhotic	2	0.00768	0.00384	13.694	1.52e-06 ***
Stress	1	0.03648	0.03648	130.071	< 2e-16 ***
Type_rhotic:Stress	2	0.00089	0.00044	1.579	0.207
Residuals	611	0.17138	0.00028		

ANOVA output of duration and the interaction between the type of rhotic and stress.

The role of word stress



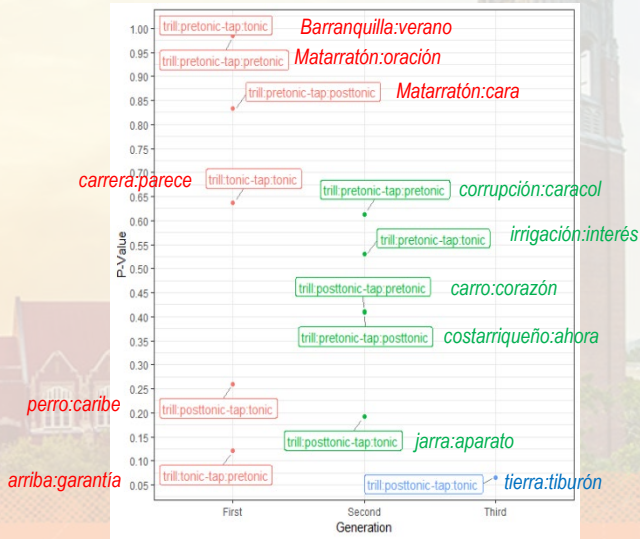
- A case of convergence towards the monolingual variety?

Mean duration of approximant taps and trills in generations of bilingual Raizales and Continental Spanish according to word stress.

The role of word stress

	Df	Sum Sq	Mean Sq	F value	Pr(>F)
type_rhotic:stress	2	0.00175	0.000875	3.363	0.036113 *
Factors (1st Gen)	diff	lwr	upr	p adj	
tap:tonic-trill:pretonic	0.004001241	-0.016077563	0.0240800445	0.992	
trill:pretonic-tap:pretonic	0.005744896	-0.018665409	0.0301552003	0.984	
trill:pretonic-tap:posttonic	0.008093672	-0.011141435	0.0273287787	0.832	
trill:tonic-tap:tonic	0.007210001	-0.006195585	0.0206155869	0.636	
tap:tonic-trill:posttonic	-0.008745595	-0.020365406	0.0028742165	0.259	
trill:tonic-tap:pretonic	0.016956137	-0.002341903	0.0362541777	0.121	
	Df	Sum Sq	Mean Sq	F value	Pr(>F)
type_rhotic:stress	2	0.00509	0.002546	7.468	0.000734 ***
Factors (2nd Gen)	diff	lwr	upr	p adj	
trill:pretonic-tap:pretonic	0.0146530535	-0.0120395210	0.041345628	0.613	
tap:tonic-trill:pretonic	-0.0150193242	-0.0403649094	0.010326261	0.530	
tap:pretonic-trill:posttonic	-0.0103002397	-0.0259746591	0.005374180	0.411	
trill:pretonic-tap:posttonic	0.0159938599	-0.0082946471	0.040282367	0.408	
tap:tonic-trill:posttonic	-0.0106665104	-0.0239176453	0.002584625	0.192	
	Df	Sum Sq	Mean Sq	F value	Pr(>F)
type_rhotic:stress	2	0.000212	0.000106	0.601	0.550
Factors (3rd Gen)	diff	lwr	upr	p adj	
tap:tonic-trill:posttonic	-0.0173846174	-0.0353815	0.0006120106	0.064	

Results of the Tukey's Post Hoc tests for each generation and the non-significant p-values for each combination of taps and trills in their stress context.

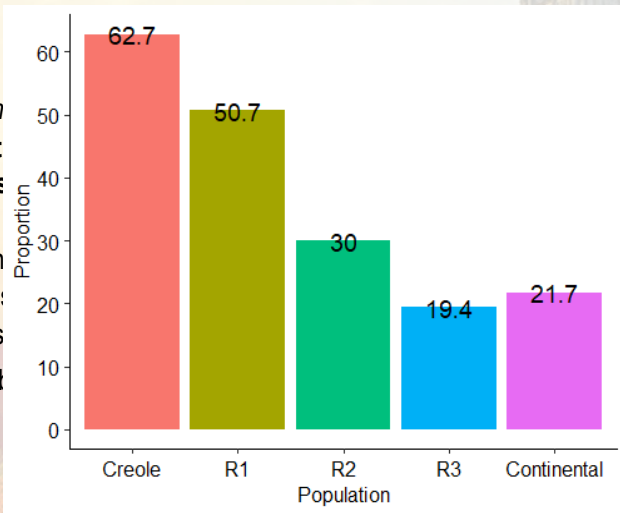


Hierarchy of non-significant factor combinations of stress and tap/trill segments. Direct examples from the corpus.

Discussion

Crosslinguistic con
R1. How different
they compare bas

A. Results show th
i. Raizal Creole has
ii. From the Spanis
iii. This difference t



segmental duration? How do

eties.

be language specific.

Distribution of non-vibrant rhotics in the varieties of the Archipelago.

Discussion

Intervocalic, Word-Medial Tap/Trill Comparison between Spanish varieties

R2. Is there a difference in segmental duration between the bilingual Raizal Spanish and monolingual Continental Spanish?

A. Yes, Raizal Spanish has longer durations and such differences occur according to word stress.
If so:

Are there any generation of Raizal Spanish speakers that neutralize the tap/trill contrast based on word stress?

A. Results show that mainly first and second generation neutralizes the tap/trill contrast.

Is non-vibrant rhotic variation spreading in the direction of Continental Spanish motivated by new generation of speakers?

A. Yes, third generation speakers are converging toward the monolingual variety and distancing themselves from the older generations.

Conclusion

- A signal of a diachronic linguistic change resulting from diverging variation patterns of segmental duration in generations of bilingual Raizales.
- Possible influence from the languages in contact supported by the phonological interference of the neutralization and maintenance of the tap/trill contrast across generations of Raizal Spanish.
 - bilingual Raizales seems to map the same phonological categorization present in the monolingual Continental Spanish variety.
- Results of this study resonates with with the framework discussed on contact situations where a creole language is in direct contact with a national non-lexifier language (Snow, 2000; Aceto, 1999; DeCamp, 1971).

Acknowledgement

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Elicitation tasks

- Raizal female (66) telling an Anansy story (the trickster spider)
- Interaction task between two adult Raizales.
 - Jigsaw task. (Adapted from Thoms J., Liao J. & Szuztak A., 2005)
 - Diapix. (Adapted from Baker & Hazan, 2011)
- Raizal female (34) narrating the picture book: A Frogstory (Mercer, 1969)

