

Prosodic Map of Chile

Foundations and (some) initial results

José Joaquín Atria (UCL)

Domingo Román (PUC)

Magaly Ruiz (UFRO)

Héctor Ortiz (UMCE)

Camilo Quezada (PUC)

Ana Cortés (PUC)

October 10, 2014

InToSpan 2014, UMass Amherst

Background

- ▶ Chile is long and narrow
 - ▶ 750.000km² in area
 - ▶ Longest North to South on Earth (>4000km) but ~350km at widest point (~215mi) and ~90km at narrowest (~55mi)
 - ▶ 62nd in population: ~17M
 - ▶ 192nd in density: <1/km² in South
- ▶ And socially very unequal: 0.52 Gini
- ▶ Limited language contact



Background

- ▶ Variation is less than expected.
- ▶ Large-scale studies on variation in Chile:
 - ▶ ALESUCh (1973)
 - ▶ ALH (1994)
 - ▶ ALECh (2004)
 - ▶ None of them on suprasegmentals



Background

Studies on suprasegmental variation:

- ▶ AMPER (international; 1999 –)
 - ▶ Focus on all Romance varieties
 - ▶ Research group in Chile
- ▶ ToBI
- ▶ This project inherits from both.



Objectives

- ▶ General description of Chilean Spanish
 - ▶ Geographic prosodic variability
 - ▶ Social prosodic variability (urban v. rural)
 - ▶ Interactions between both
- ▶ Contribute data to AMPER project
- ▶ Generate publicly available interactive map



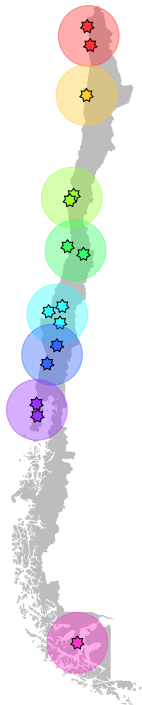
Hypotheses

- ▶ There **are** prosodic differences in Chilean Spanish.
- ▶ They vary by
 - ▶ socio-cultural environment (urban v. rural)
 - ▶ geographic zone
 - ▶ gender?
- ▶ Greater variation in rural settings



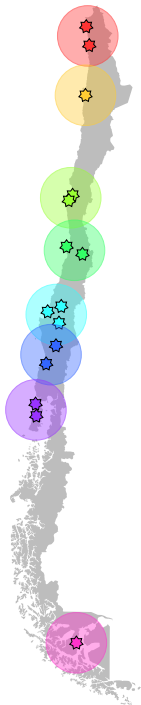
Zones

- Zone 1: Arica / Iquique
- Zone 2: Antofagasta
- Zone 3: La Serena / Coquimbo
- Zone 4: Santiago / Valparaíso
- Zone 5: Chillán / Concepción / Los Ángeles
- Zone 6: Temuco / Valdivia
- Zone 7: Castro / Ancud
- Zone 8: Punta Arenas



Zones

- ▶ 8 geographic zones
- ▶ 20 participants per zone
- ▶ Half male, half female
- ▶ Half rural, half urban
- ▶ All participants working class



Some samples: male, zone 6



tengo unas gallinitas, y cosecho huevitos...
vendo también

I have some chickens, I harvest some eggs...
I sell them too



Some samples: female, zone 6

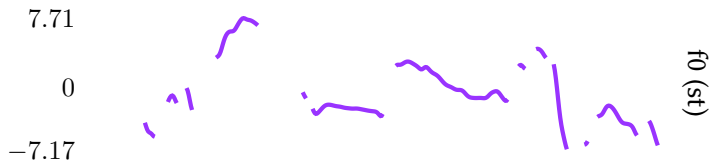


la mantención, está en la casa. porque el trigo se cosecha, los cereales se cosecha, el poroto...

we make ends meet. because [we] grow [our own] wheat, [we] grow [our own] cereals, [same for] beans...

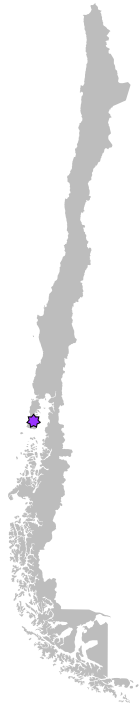


Some samples: female, zone 7

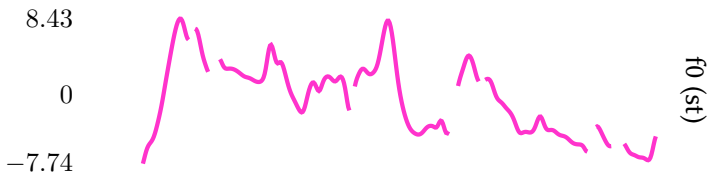


después se exprime y queda una cosa dura, *po*,
queda un *milcao*

then you drain it and there's a hard thing left,
there's a *milcao*



Some samples: male, zone 8



no, porque yo te digo tres años, no te estoy diciendo diez años o quince años

no, because I'm saying three years, I'm not saying ten or fifteen years



Acoustic variables

- ▶ Mainly f_0 (as Hz and st re. mean)
- ▶ Intensity*
- ▶ Syllable duration (from vowel nuclei)
- ▶ Some articulatory data
 - (Not for all participants)
 - ▶ Vocal fold contraction rate
 - ▶ High-speed video



Materials

- ▶ Spontaneous speech
 - ▶ Non-structured interview (at beginning and end)
- ▶ Controlled speech
 - ▶ Read phrases
 - ▶ Read passages
- ▶ Semi-Controlled speech
 - ▶ Image enumeration
 - ▶ Reformulations
 - ▶ ~~Maptask~~ DCT



Materials: details

Read phrases (53)

- ▶ AMPER phrases (fixed corpus, unexpanded)
 - ▶ La guitarra se toca con pánico (9)
The guitar is played with panic
 - ▶ ¿La cáscara se saca con paciencia? (9)
Is the peel removed with patience?
- ▶ Stress clashes (11)
 - ▶ Estuvo **tres meses** sin tomar agua
He spent three months without drinking water
 - ▶ Esa **canción suena** bastante bien
That song sounds quite good



Materials: details

Read phrases (53)

- ▶ Enumeration (3)
 - ▶ Conoció el campo, las montañas y la selva
She saw the country, the mountains, and the jungle
- ▶ Double stress (6)
 - ▶ Pensaba **sinceramente** que lo había hecho bien
I sincerely thought she had done a good job



Materials: details

Read phrases (53)

- ▶ Vocative (3)
 - ▶ Me gustaría que viajaras más seguido, **María**
I would like you to travel more often, María
- ▶ Parenthetical (3)
 - ▶ El cóndor
—**que es el ave más grande de Chile**—
habita en las alturas
The cóndor
—*the largest bird in Chile*—
lives in high places



Materials: details

Read phrases (53)

- ▶ Disjunction (2)
 - ▶ Voy a arrendar una casa o un departamento.
Todavía no estoy seguro
I'm renting a house or a flat. I'm not sure yet
- ▶ Direct interrogative (4)
 - ▶ ¿Le gusta el pan [amasado [de la panadería de la esquina [donde atienden bien]]]?
Do you like [kneaded] bread [from the bakery in the corner [where they serve you well]]?



Materials: details

Read phrases (53)

- ▶ Declarative (4)

- ▶ Me gusta el [amasado [de la panadería de la esquina [donde atienden bien]]]

I like [kneaded] bread [from the bakery in the corner [where they serve you well]]



Materials: details

Read passages

- ▶ Three short texts
- ▶ Contain the same elements as phrases



Materials: details

Image enumeration

- ▶ Three images representing nouns
- ▶ Nouns have different stress positions
- ▶ Different combinations of stress



Materials: details

Image enumeration

- ▶ Three images representing nouns
- ▶ Nouns have different stress positions
- ▶ Different combinations of stress



Materials: details

Reformulations

- ▶ Short text as base
- ▶ Participants needs to reformulate
- ▶ Topic and content is relatively fixed
- ▶ Participants can go on tangents



Materials: details

DCT (Discourse-Completion Task)

- ▶ Short text sets a scene
- ▶ Explicit prompt of participant response
- ▶ Participant responds in a one-person play



Difficulties

- ▶ Poor recording conditions
- ▶ Low threshold for task complexity
 - ▶ Poor reading skills, mainly in rural areas
- ▶ Coordination of research teams over large areas
- ▶ Social and gender differences might influence



Acknowledgements

This project has received funding from Fondecyt Chile (#1130720).

Special thanks to

- ▶ Eugenio Martínez Celdrán
- ▶ Ana María Fernández Planas
- ▶ Pilar Prieto
- ▶ Paolo Roseano, and
- ▶ the attendants at SOCHIL 2013 and
- ▶ the UMass Sound Workshop

for their advice and valuable insight.

