

# Positional neutralization of back vowels in two Majorcan Catalan dialects

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## Introduction

### Stress-induced back vowel alternations in Catalan

- Phonological rules vary across Catalan dialects
- Main dialectal division: Western, Eastern [4]

Western Catalan			Eastern Catalan		
Phon.	[+stress]	[−stress]	Phon.	[+stress]	[−stress]
/o/	c[o]ssa	c[o]sseta	/o/	c[o]ssa	c[u]sseta
/ɔ/	c[ɔ]sa	c[ɔ]seta	/ɔ/	c[ɔ]sa	c[u]seta
/u/	c[u]ssa	c[u]sseta	/u/	c[u]ssa	c[u]sseta

[+stress]	o	ɔ	u
[−stress]	o		

[+stress]	o	ɔ	u
[−stress]	u		

### Exceptions to norm in Eastern Catalan

- Majorcan Catalan: Eastern dialect but Western back-vowel pattern
- Sóller Catalan: Majorcan Catalan, but Eastern back-vowel pattern
- i.e., Sóller: Exception within exception (according to tradition) [2]

### Village of Sóller, Majorca

- Population 14,000 (1.75% of Majorca's total population)
- Isolated by rugged mountains (tunnel built in 1996)
- Commuting to Palma (capital) daily is increasingly common

### Koineization across Europe

- Regional dialects tend towards loss of idiosyncratic features [3]
- Koineization* due to dialect contact and population movement [1]

### Goals of present study

- Explore back vowel alternation(s) with acoustic data
- (Described pattern may hide incomplete neutralization)
- Evidence of effects of *koineization* or dialect contact in Majorca?

## Method

### Speakers

- 12 male speakers in their twenties (range = 20-26)
- 6 from Sóller: born, raised and residing in village
- 6 from Palma: born, raised and residing in city or surroundings

### Materials

- 60 nouns with stress on stem *vs.* stress on derivational morpheme

Phoneme	[+stress]	[−stress]
/o/-words	(10) cossa	(10) cosseta
/ɔ/-words	(10) cosa	(10) coseta
/u/-words	(10) cussa	(10) cusseta

- 60 items × 2 dialects × 6 speakers × 2 iterations = 1,440 tokens
- Same carrier sentence for each target word pair:

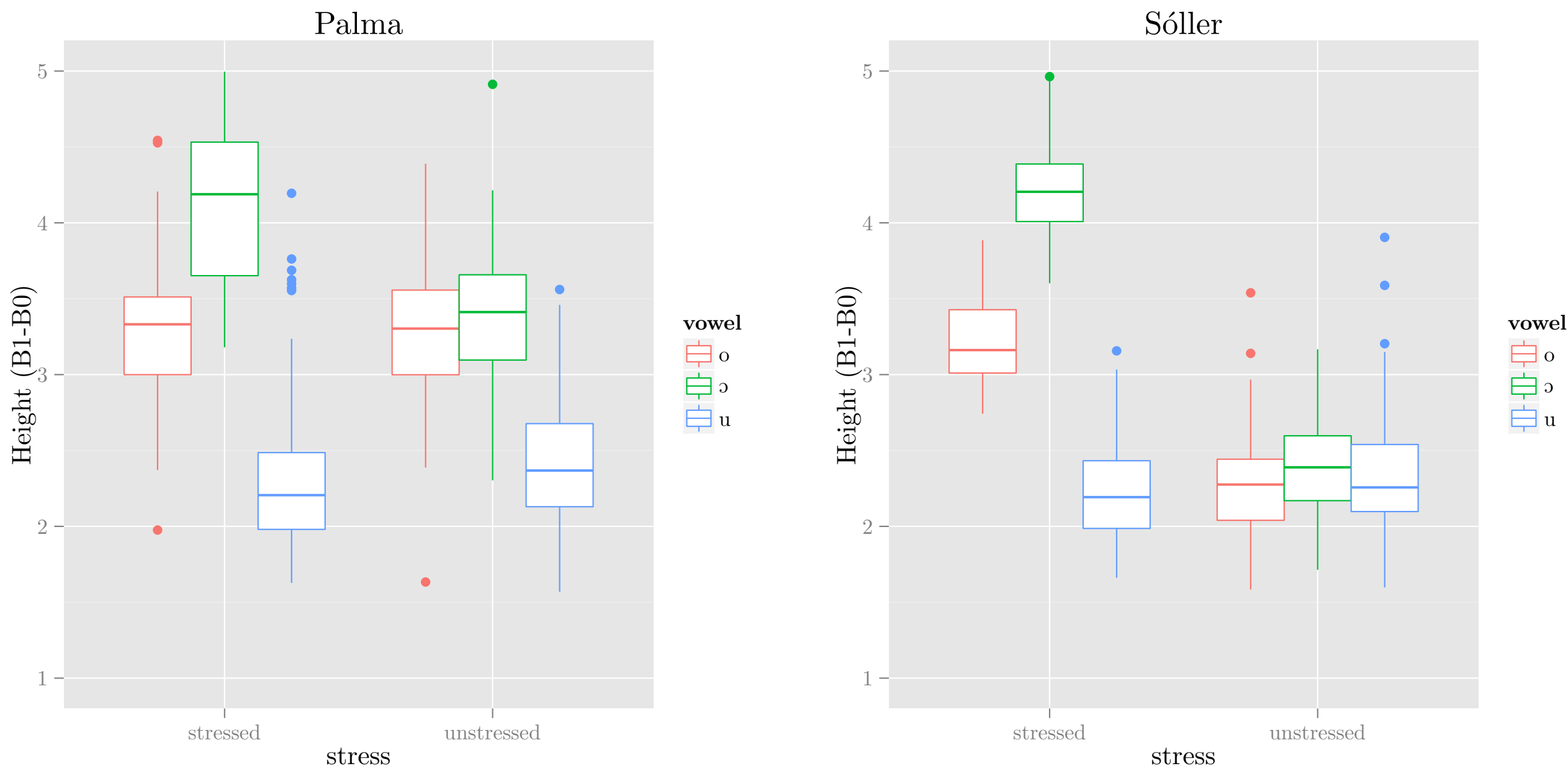
– *En Joan menja una **poma** / **pometa** des seu hortet*

### Analysis

- Height {F1 (Bark) – F0 (Bark)} at mean of 25%, 50%, 75%
- Height ~ phoneme × stress × dialect + ε {by-subjects, by-items}

## Results

**Figure 1:** Height values for /o/, /ɔ/ and /u/ in stressed and unstressed positions by speakers from Palma (left) and Sóller (right)



[+stress]	o	ɔ	u
[−stress]	o		

[+stress]	o	ɔ	u
[−stress]	u		

## Conclusion

### Conclusions

- Acoustic study confirms traditional dialectological accounts
- Idiosyncratic feature of Sóller Catalan seems stable
  - No measurable effects of increasing dialect contact

### Remaining questions

- Why is this (i.e., Sóller) pattern stable against all odds?
  - Is stability due to the geographic situation of Sóller?
  - Is it due to its prestige as identity marker?
  - Sociophonetic study is needed
- More generally, when does *koineization* occur?
  - Extralinguistic factors adduced in *koineization*, not sufficient

### Our *real* goal

- How do phonological alternations modulate lexical processing?
  - How many phonolexical entries of alternating morphemes?
  - Method: Cross-modal (auditory-to-visual) priming

Dialect	Pattern	Prime (aud.)	Target (vis.)
Palma	o	ko.'sə.tə	cosseta
	ɔ ~ o	ko.'zə.tə	coseta
Sóller	o ~ u	ku.'sə.tə	cosseta
	ɔ ~ u	ku.'zə.tə	coseta

- Does hearing cross-dialectal variants hinder lexical access?
- We now know alternations are indeed categorical in these dialects

## Selected references

- [1] Paul Kerswill. Dialect levelling and geographical diffusion in British English. In David Britain and Jenny Cheshire, editors, *Social dialectology: In honour of Peter Trudgill*, number September, pages 223–243. John Benjamins Publishing, Amsterdam, 2003.
- [2] Daniel Recasens. *Fonètica descriptiva del català: Assaig de caracterització de la pronúncia del vocalisme i consonantisme del català al segle {XX}* (Biblioteca d'Estudis Catalans). Institut d'Estudis Catalans, 1Àl ed., 1991.
- [3] Eivind Torgersen and Paul Kerswill. Internal and external motivation in phonetic change: Dialect levelling outcomes for an English vowel shift. *Journal of Sociolinguistics*, 8(1):23–53, February 2004.
- [4] Joan Veny. *Els parlars catalans: (síntesi de dialectologia)*. Moll, 1983.