

# FACTORS AFFECTING PROMINENCE IN OCCITAN, FRENCH AND ITALIAN



DFG Deutsche Forschungsgemeinschaft

RAFÈU SICHEL-BAZIN<sup>1,2</sup>, CAROLIN BUTHKE<sup>1</sup>, TRUDEL MEISENBURG<sup>1</sup>

<sup>1</sup>Universität Osnabrück – <sup>2</sup>Universitat Pompeu Fabra (Barcelona)  
rsichelb@uos.de, cbuthke@uos.de, tmeisenb@uos.de



## Primary accentuation

### French

Accent position **prosodically** defined:  $[(\sigma)_n \sigma (\sigma_o)]_{AP}$   
*cité – patio – larme – de petites larmes*

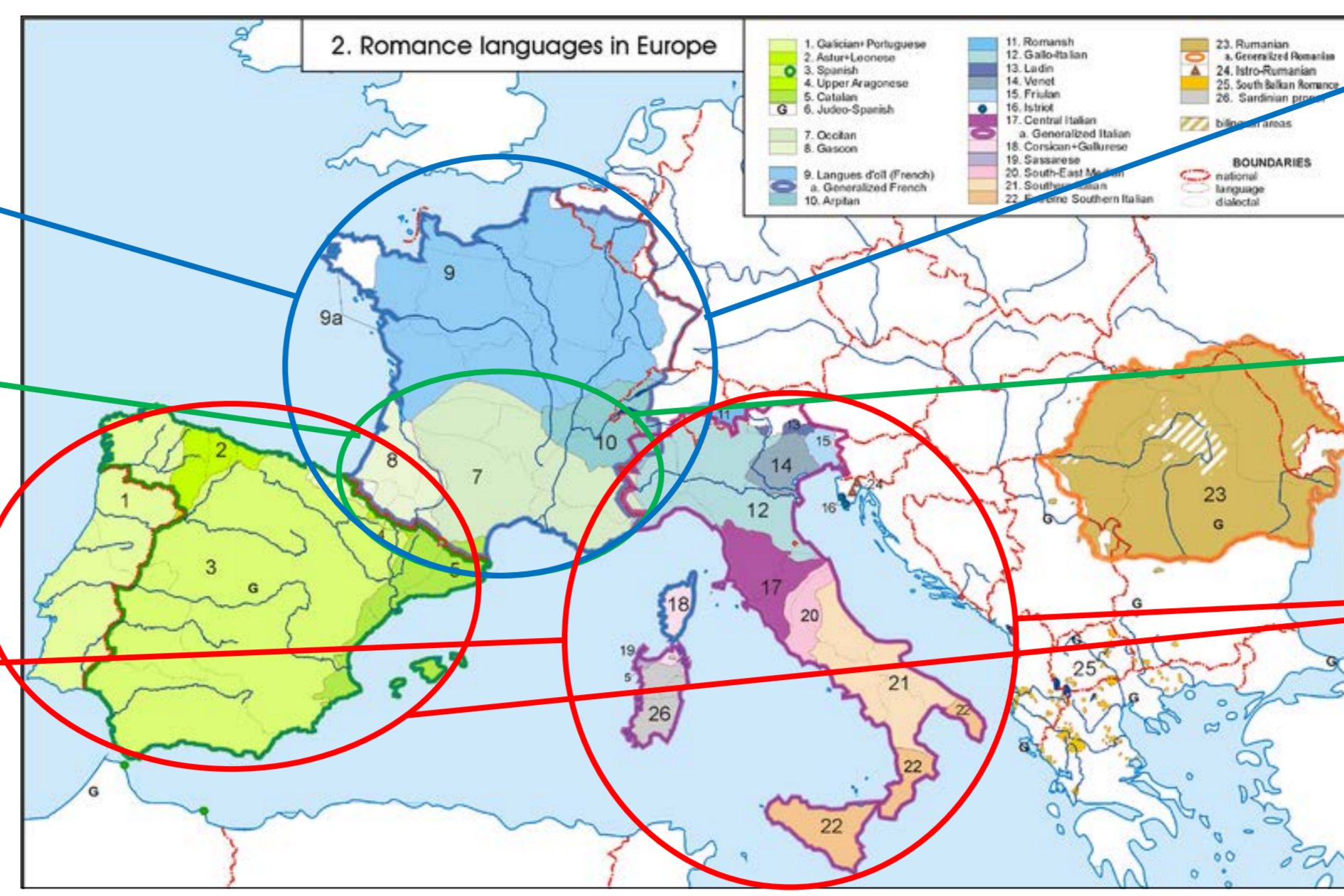
### Occitan

Accent position **lexically** defined:  $[(\sigma)_n \sigma (\sigma)]_{\omega}$   
*ciutat – pati – lagrema*

### Italo- (and Ibero-)Romance

Accent position **lexically** defined:  $[(\sigma)_n \sigma (\sigma) (\sigma)]_{\omega}$   
*città – patio – lacrima*

## ACCENTUATION SYSTEMS IN ROMANCE



## Secondary accentuation

### French

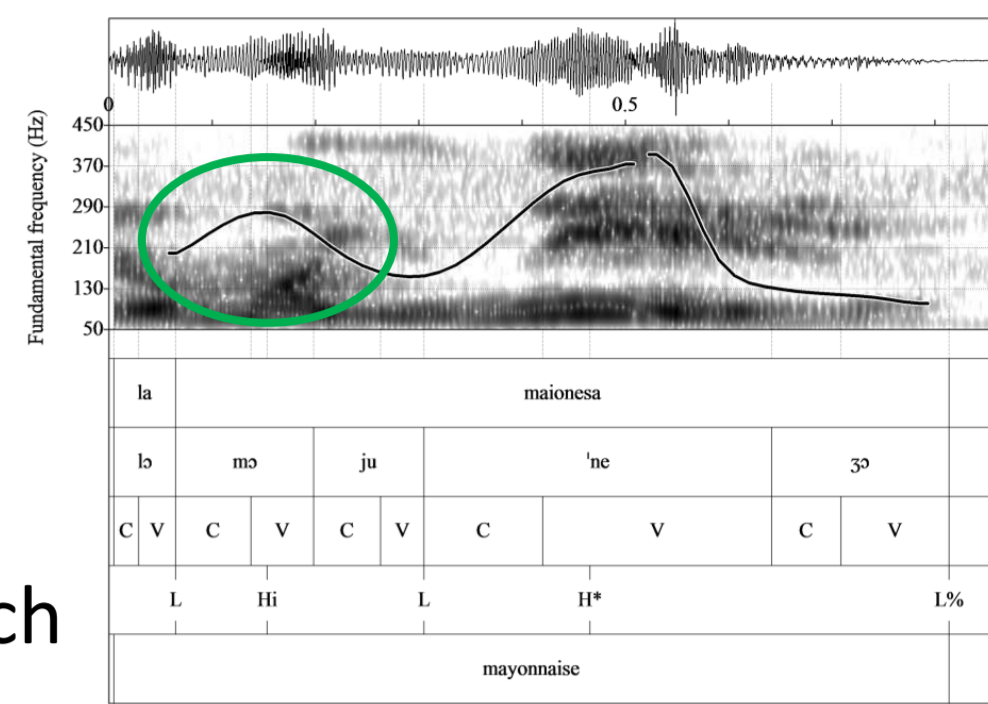
Non obligatory initial rises:  
 $[(\sigma) \sigma (\sigma)_n \sigma (\sigma_o)]_{AP}$  *de petites larmes*  
“accent d’insistance” → generalization → left edge marker

### Occitan

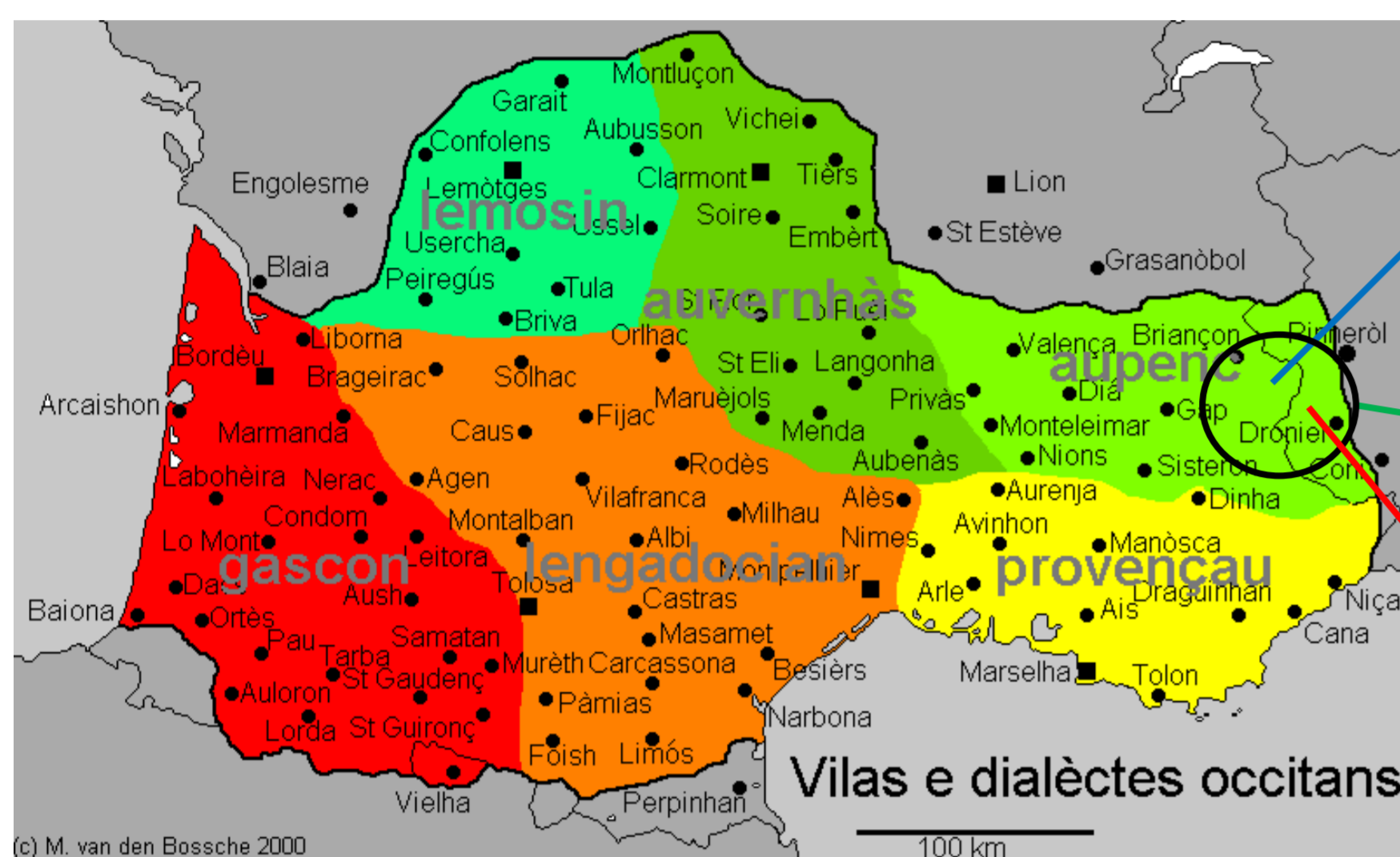
Initial rises (similar to French)  
 $[(\sigma) \sigma (\sigma)_n \sigma (\sigma)]_{\omega}$  *la maionesa*

### Italo- (and Ibero-)Romance

Secondary accents rare  
journalistic, didactic, public speech  
rhythmic function



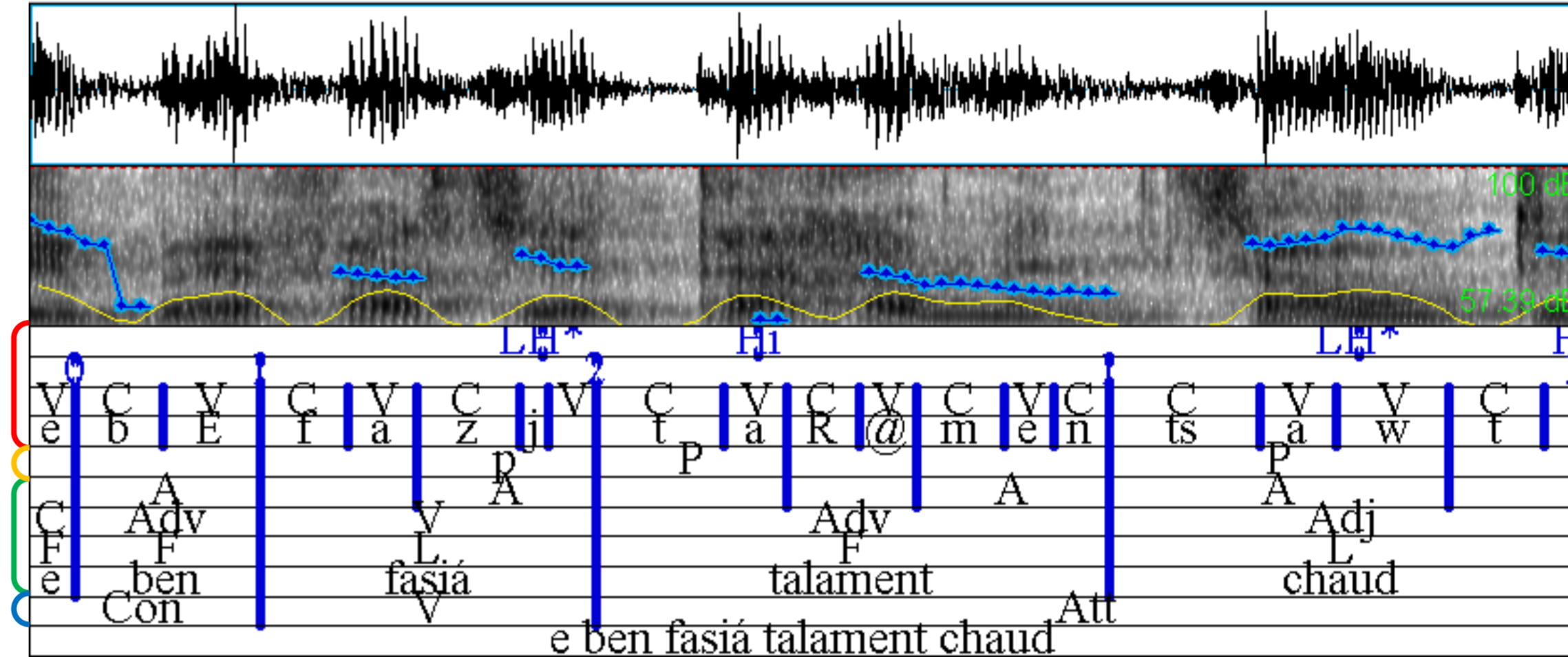
## VARIETIES AND SPEAKERS



**Southern**  
French (F\_Fr) } 1 bilingual male  
          (F\_Oc) } 69 y.o.  
Occitan (I\_Oc) }  
Italian (I\_It) } 1 bilingual male  
(and Piedmontese) } 59 y.o.

## METHODOLOGY

### Annotation in Praat:



### Extraction for each syllable (script):

- **phonology:** ToBI labels; syllable structure
- **perceived prominence**
- **lexicon:** accentable/non-accentable; lexical/function word; word-initial/-medial/-final
- **syntax:** phrase-initial/-medial/-final (XP-projection)
- **acoustics:** F0, duration, intensity (mean value; difference from previous syl.)

**Statistic tests:** t-tests,  $\chi^2$ , ANOVAs (SPSS)

## DATA: The Northwind and the Sun: Fable summaries

Summary after listening to a version in the speaker’s variety  
→ spontaneous monologues (20s – 80s) with similar organization

## RESULTS

Acoustic parameters in accentable syllables compared to non-accentable syllables (t-tests)	VARIETY	F_Fr	F_Oc	I_Oc	I_It
	<b>ACOUSTIC PARAMETERS</b>				
	<b>Duration</b> (mean syllabic value)	+ 85.9 ms (s.d. 10.5) ***	+ 71.3 ms (s.d. 9.9) ***	+ 65.9 ms (s.d. 12.4) ***	+ 70.2 ms (s.d. 11.3) ***
	<b>Intensity</b> (difference between mean and mean of previous syllable)	+ 2.58 dB (s.d. 0.68) ***	+ 3.00 dB (s.d. 0.58) ***	-0.32 dB (s.d. 0.59) n.s.	+ 2.46 dB (s.d. 0.63) ***
		<b>RISING ACCENTS</b>	<b>RISING ACCENTS</b>	<b>FALLING ACCENTS</b>	
		+ 2.13 st (s.d. 0.38) ***	+ 1.86 st (s.d. 0.68) **	-1.46 st (s.d. 0.48) **	-0.30 st (s.d. 0.60) n.s.

## Prominence judgments

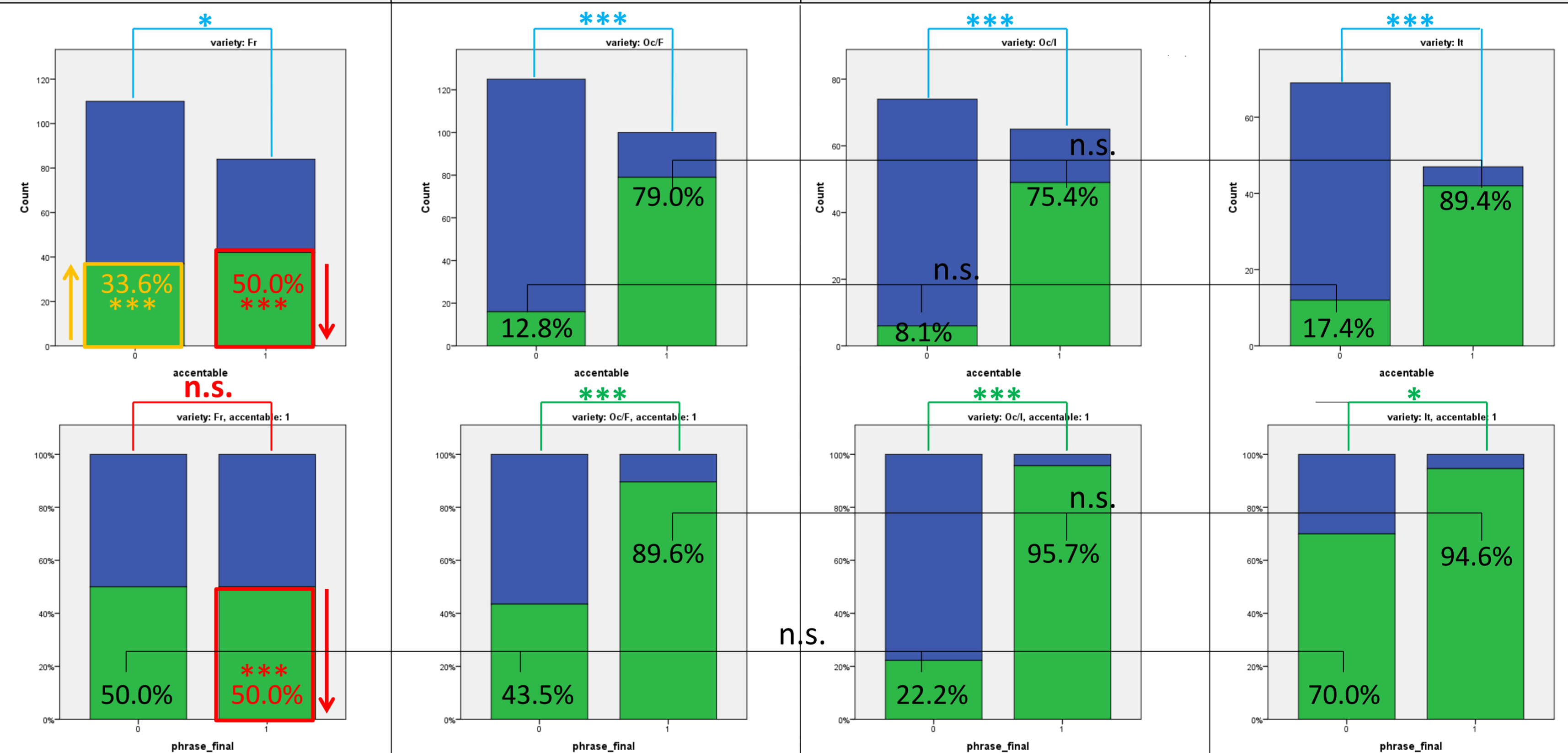
Proportion of syllables perceived as prominent among accentable (right) vs. non-accentable (left) syllables in each variety:

- More accentable than non-accentable syllables perceived as prominent in all varieties.
- Non-accentable syllables perceived as prominent: + frequent in F\_Fr
- Accentable syllables perceived as prominent: - frequent in F\_Fr

Proportion of accentable syllables perceived as prominent in phrase-final (right) vs. non-final (left) position in each variety:

- + frequent in phrase-final than non-final position in I\_It, I\_Oc and F\_Oc
- no effect of position in the syntactic phrase in F\_Fr

■ non-prominent  
■ prominent



## CONCLUSIONS

Though accentable syllables have significant acoustic correlates in French as in Occitan and Italian, prominence assignment in French differs from the other Romance languages: more prominent non-accentable syllables, less prominent accentable syllables, no effect of position in the syntactic phrase.

Occitan behaves in a similar way to its southern neighbors, even when it is in close contact with French: accentable syllables tend to be prominent, mostly in phrase-final position.

But only 2 speakers and 1 coder! → next step: perception experiment online in several language contact situations.

## REFERENCES

Avanzi, Mathieu (to appear). “Note de recherche sur l’accentuation et le phrasé prosodique à la lumière des corpus de français”. Tranel (Travaux neuchâtelois de linguistique) 58.

Fougeron, Cécile & Jun, Sun-Ah (1998). “Rate Effects on French Intonation: Prosodic Organization and Phonetic Realization”. Journal of Phonetics 26, 45-69.

Hualde, José Ignacio (2003). “Remarks on the diachronic reconstruction of intonational patterns in Romance with special attention to Occitan as a bridge language”. Catalan Journal of Linguistics 2, 181-205.

Jun, Sun-Ah & Fougeron, Cécile (2000). “A Phonological Model of French Intonation”. In Botinis, Antonis (ed.): Intonation: Analysis, Modeling and Technology. Dordrecht: Kluwer Academic Publishers, 209-242.

Jun, Sun-Ah & Fougeron, Cécile (2002). “Realizations of Accentual Phrase in French Intonation”. Probus 14, 147-172.

Post, Brechtje (1999). “Restructured Phonological Phrases in French: Evidence from Clash Resolution”. Linguistics 37:1, 41-63.

Post, Brechtje (2000). Tonal and Phrasal Structures in French Intonation. The Hague: Thesus.

Post, Brechtje (2011). “The Multi-faceted Relation between Phrasing and Intonation Contours in French”. In Gabriel, Christoph & Lleó, Conxita (eds.): Intonational Phrasing in Romance and Germanic: Cross-linguistic and Bilingual Studies. Amsterdam: John Benjamins, 43-74.

Roca, Iggy M. (1999). “Stress in the Romance languages”. In Hulst, Harry van der (ed.): Word Prosodic Systems in the Languages of Europe. Berlin / New York: Mouton de Gruyter, 659-811.

Schultz-Gora, Oskar (1924/1906). Altprovenzalisches Elementarbuch. Heidelberg: Winter.

Sichel-Bazin, Rafèu; Buthke, Carolin & Meisenburg, Trudel (2012). “The prosody of Occitan-French bilinguals”. In Braunmüller, Kurt & Gabriel, Christoph (eds.): Multilingual Individuals and Multilingual Societies. Amsterdam: Benjamins, 349-364.

Sichel-Bazin, Rafèu; Meisenburg, Trudel & Prieto, Pilar (submitted). “Intonational phonology of Occitan: towards a prosodic transcription system”. In Frota, Sónia & Prieto, Pilar (eds.): Intonational Variation in Romance. Oxford: Oxford University Press.

## ACKNOWLEDGEMENTS

This work was funded by the Deutsche Forschungsgemeinschaft (project “Intonation und Rhythmus im Sprachkontakt: Okzitanisch – Französisch – Italienisch”). Thanks to our speakers, and to Svenja Langkeit and Henning Poppel for their very helpful work.