

Introduction

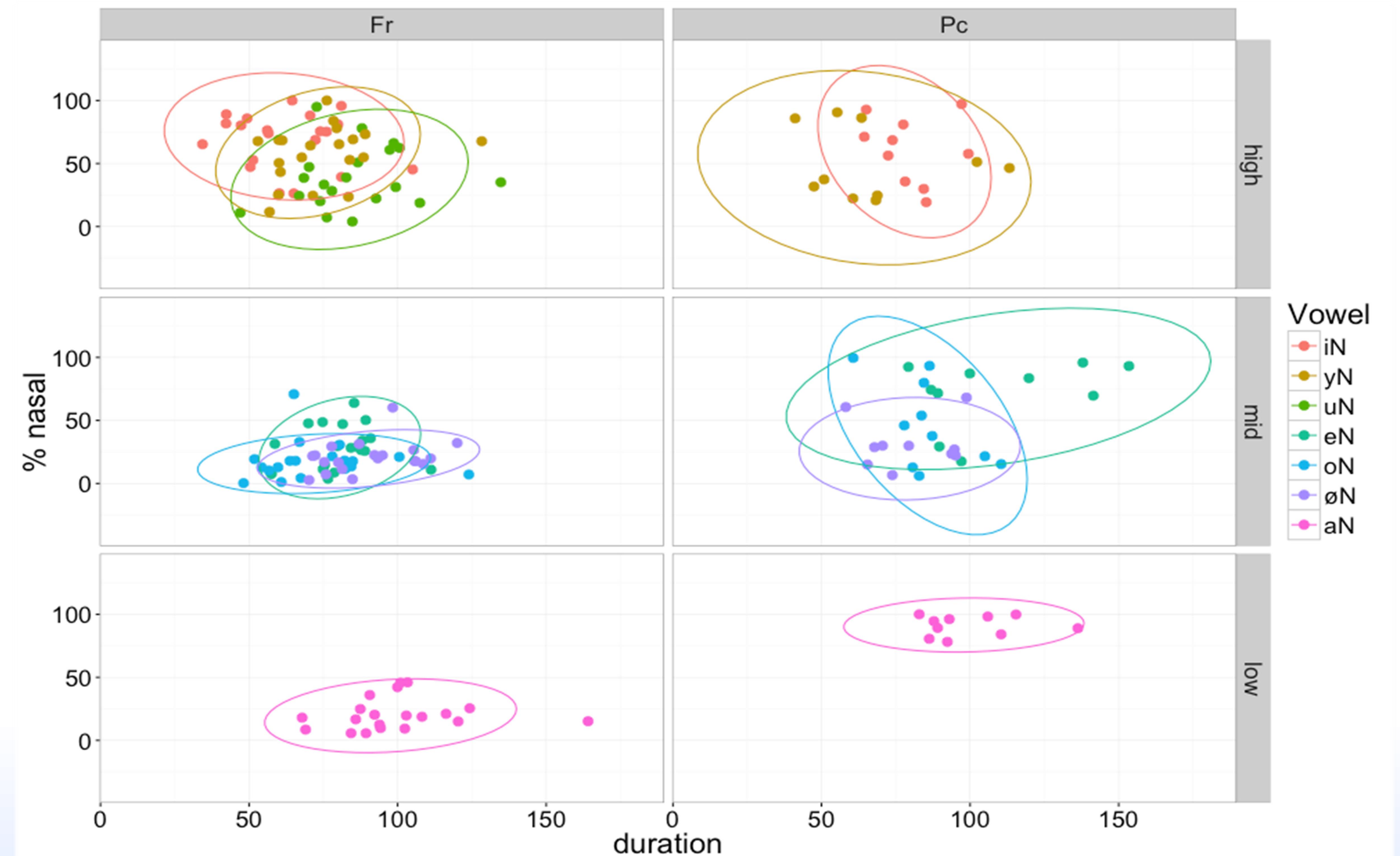
- ▶ What phonological forces regulate nasal vowels, and how can we test them?
- ▶ Case study of French and Picard: phonetics → phonological description → theory.
- ▶ Extension of Solé's (1992) methodology: % nasal vs. duration reveals phonological function, but looking at each V individually, as height influences both ease of nasalization and inherent duration.
- ▶ The nasometric experiment corroborates certain markedness relations existing for oral vowels. Unclear how they may interact/combine.

French vs Picard

- ▶ Closely related languages of Northern France with oral-nasal contrast (low and mid series).
- ▶ Nasalization of /a, e, o/ in Picard (Vasseur 1963/1996, cf. José & Auger 2004).
- ▶ High vowels have highest rates of nasality preceding N in French (esp. Delvaux et al. 2008, Rochet & Rochet 1991)

Methodology

- ▶ **Participants:** 10 monolingual French speakers, 10 bilingual Picard-French speakers (Vimeu variety).
- ▶ **Instrument:** Glottal Enterprises hand-held nasometer.
- ▶ **Materials:** word-final target vowel + tautosyllabic N in carrier expression; total n vowels = 1329 (French) and 623 (Picard).
- ▶ **Procedure:** 3 randomized readings of each phrase in self-paced reading task.
- ▶ **Measurements:** nasal & oral energy, calculated into percentage (DER, Dow 2014); vowel duration



Results

- ▶ Each speaker's % nasal and duration averaged for each V quality
- ▶ Phonological nasalization: 50+% nasal, not decreasing with time
- ▶ French nasalizes high front vowels /i, y/
- ▶ Picard nasalizes front unrounded vowels /a, e, i/

Discussion

- ▶ Height alone cannot account for either language's patterns, nor can phonetic factors alone.
- ▶ Picard suggests [+round] > [-round] and [+back] > [-back].
- ▶ If French avoids neutralization of /a, e, o, (ø)/, nasalization applies where it can: **high > mid (>) low**. No /u/-nasalization because of backness.
- ▶ Markedness relations currently mirror those applying to oral vowels. Unclear how factors combine.