1. INTRODUCTION
1.1 OCCITAN AND FRENCH WITHIN ROMANCE
1.2 PROJECT "INTONATION IM SPRACHKONTAKT: OKZITANISCH UND FRANZÖSISCH"

Contact in Southern France: Occitan-French diglossia (Schlieben-Lange 1993)
- Occitan
  - main language until mid 20th century
  - no more transmission since
  - endangered minority language, no monolinguals
- French
  - only official language (since 15th century)
  - increased diffusion during 20th century
  - main language now, interferences with Occitan in the South

Our research project:
Study the prosodic consequences of this language contact
→ comparison between:
  NORTHERN FRENCH (NF), MERIDIONAL FRENCH (MF); OCCITAN (OC)

1.3 PROSODIC CHARACTERISTICS
1.3.1 PRIMARY ACCENT
French:
Position prosodically defined (Trubetzkoy 1939...) 
[o_t] [o_e] \_ap
\_patr – \_parto – \_larme – de \_petites \_larmes

Occitan:
Position lexically defined (Schulte-Gora 1954...)
[o_t] [o_e] [o_e] \_ap
\_patr – \_pati – \_lagrema
‘to suffer’ = ‘patir’ = ‘larme’

Southern Romance languages:
Position lexically defined (Bourciez 1967...)
[o_t] [o_e] [o_e] \_ap
Catalan: \_patr – \_pati – \_ปรากฏ

1.3.2 SECONDARY ACCENT
French:
Non obligatory initial rises \([\varepsilon(\varepsilon)],[\varepsilon]_{\varepsilon} \_ap\) de \_petites \_larmes
"accent d’insistance" (Fauchet 1956, Carton et al. 1976...)
generalization? (Fenagy 1981; Cames 1997; Andre & Girard 1997; Antelouni 2001...)
left edge marker (Jun & Fougeron 2000, 2002; Welby 2006; Antelouni et al. 2007...)

Ocitan:
Initial rises similar to those of
\([\varepsilon(\varepsilon)],[\varepsilon]_{\varepsilon} \_ap\)
(Huaule 2003, 2004; Sichel-Bazin 2009)

Ibero-Romance:
Secondary accents rare
journalistic, didactic, public speech
rhythmic function (Huaule 2007...)

1.4 THEORETICAL FRAMEWORK
1.4.1 AUTOSEGMENTAL METRICAL MODEL (Pierrehumbert 1980...)

- Independent tonal tier, 2 discrete tonal levels:
  High tone \(H\) / Low tone \(L\)

- Anchor points / targets on segmental tier: tones associate with
  • metricaly strong syllables \(\rightarrow\) Pitch accents
    • monotonal \(H^*, L^*\)
    • bitonal \(H^*L^*, H^*L, L^*H\)
  • right edge of prosodic constituents \(\rightarrow\) Boundary tones
    Intonation Phrase (IP) \(\rightarrow\) T±
    Intermediate phrase (ip) \(\rightarrow\) T-

- Contour: interpolation between tonal targets
- Downstep: natural F0 downtrend in utterances blocked by boundary tones

1.4.2 PROSODIC HIERARCHY
- Prosody structures discourse: phrasing
- Different levels of prosodic constituents (Selkirk 1984, Newborn & Vogel 1986; Pott 2000...)
  \(\alpha\) Syllable
  \(\beta\) Foot
  \(\gamma\) Prosodic word
  PP Phonological Phrase
  IP Intonation Phrase
  U Utterance
- Other models, other constituents proposed
  TU Tonal Unit (Di Cristo 1998)
  IP Intermediate phrase (Pierrehumbert & Beckman 1988, O’Impen & Michel 2010)
- Strict Layer Hypothesis (Selkirk 1984...)
  Prosodic units organized in a non recursive hierarchy
1.5 GOAL: PHRASING INTERFERENCES IN FRENCH AND OCCITAN BILINGUAL SPEAKERS

Point out prosodic features
- convergent: OC and MF (varieties in contact)
- divergent: MF and NF (no contact with OC)

→ Detect prosodic boundaries and constituents
  - Criteria
  - Realization
  - Classification and hierarchy
  - Internal organization of constituents

→ Cross-variety comparisons

2. METHODOLOGY
2.1 CORPUS

Summary of Aesop fable “The North Wind and the Sun” after listening (IPA 1999)

- Life (F-59): 40 NF speakers recorded
  → 4 representative speakers
- Orkans (F-45): 40 NF speakers recorded
  → 4 representative speakers
- La Cauna (F-81): 40 bilinguals OC/MF
  → 5 representative speakers

Short texts (20 to 80 s), similar organization, shared lexical items...
→ Study phrasing organization

Prosodic analysis (Prat: Boersma & Weenink 2010)
syllables, tones, prosodic boundaries, orthographic transcription

2.2 BOUNDARIES AND CONSTITUENTS: CRITERIA

• Prosodic boundary markers
  - Final lengthening
  - Tonal marking (pitch accent, boundary tone, blocked downstep)
  - Autonomy of the chunk (natural sounding when isolated?)
  - (Silent) pauses
  - No resyllabification

• Criteria for constituent inventory
  - Prosodic approach; no syntactic or semantic constraints a priori
  - Simplicity; as few constituent types as possible
  - Compatibility OC/MF?
  - Compatibility with NF?

3. RESULTS
3.1 ACCENTUAL PHRASE (AP)

Basic constituent of OC, MF and NF prosodic hierarchy

• Characterized in all 3 varieties by
  → Final pitch accent
  → Final lengthening
  → No resyllabification across APs
  → Prosodic autonomy and internal coherence
  → Tonal bipolarization: /LHILH*/
  → No blocking of downstep
  → One or several lexical items per AP
    (phrasing varies as a function of speech rate, style...)

3.1 AP – INTERNAL STRUCTURE

MINIMAL AP: one (accented) monosyllabic lexical word; (L)H*
MAXIMAL AP: several lexical words, final accent only on the last one

Structure of Occitan and French APs:

\[
\begin{align*}
((C))(Syl) &\rightarrow ((C))(Syl)(Syl)(Syl) \rightarrow \text{Syl}(Syl) \\
((L)(H)) &\rightarrow (*) \\
((T)(T)) &\rightarrow (\text{optional; left edge: on 1st syllable of 1st lexical word or on a clitic})
\end{align*}
\]

\((T)(T)^*\) obligatory; right edge of AP; pitch accent, lengthening

\((L)(H)^*\) optional; left edge: on 1st syllable of 1st lexical word or on a clitic

* rhythmical head; prominence without tonal specification

3.1.1 AP – FINAL ACCENTS

\[
\begin{align*}
((C))(Syl) &\rightarrow ((C))(Syl)(Syl)(Syl) \rightarrow \text{Syl}(Syl) \\
((L)(H)) &\rightarrow (*) \\
\end{align*}
\]

• Possible features:
  → Vowel lengthening
  → Tonal movement
  → Intensity peak
• Prosodic function: (obligatory) right edge marking
• Alignment with the last acceptable syllable
• Accent types found:
  LH* rising
  (L)H* high
  L* low
  HL* falling
3.1.2 AP – INITIAL ACCENTS

- Tonal movements on syllables that are not metrically strong (French traditional "accent d’insistance")
- Possible features:
  - Tonal rise: (L)Hi
  - Intensity peak
  - Strengthening of the initial consonant (emphasis)
- Prosodic function: (optional) left edge marking
  - on initial syllables of lexical words
  - even on clitics in OC and MF → contact consequence?
- Generalized today?
  → Our corpus (OC, MF and NF): present, though not very frequent
  → Initial accents: a feature of Gallo-Romance

3.1.3 MINOR PROMINENCES WITHIN AP

- Acoustic correlates of *
  - Small intensity (and FO) peak, no lengthening
    → Rhythmic function
  - Lexically strong syllables within APs incompletely deaccented
    → Reminiscences of lexical accents as heads of feet
  - Frequency (and salience) of *
    → OC > MF > NF
  → Continuum of lexical word autonomy?
- More work on feet needed: internal structure, prominence assignment rules, realization in the different varieties...

3.2 INTONATION PHRASE (IP)
Superior prosodic constituent, one or more APs, marked by:
- most prominent final accent (nuclear accent → work in progress)
- major final lengthening
- boundary tone: 1%
- often pause
- prosodic independence
- syntactic and semantic independence

3.3 INTERMEDIATE PHRASE (ip)?

- Unit between AP and ip? → Different approaches, open debate
  (For French: Michelas & D’Imperio 2009, D’Imperio & Michelas 2010)
- IntOcFr corpus (OC, MF, NF)
  - Boundaries perceived as stronger than AP - weaker than IP-final
  - Chunks with intermediate prosodic autonomy
  - Boundary tones within IPs
    → OC, MF: easier to detect on the frequent post-accentual syllables
    → NF: less frequent schwa syllables → less detectable
    (tonal crowding on the accentual syllable?)
  → ip: relevant unit in the Gallo-Romance prosodic hierarchy?
  → seems necessary for OC and MF, but less clear for NF
3.3 INTERMEDIATE PHRASE (ip)

- boundary tone T-
- downstep blocking

(not always apparent)

→ ip-internal APs interrelated

4. CONCLUSION

4.1 INTERMEDIATE PHRASE (ip)

AP in OC, MF and NF:

(\( L \) Hi) (*) \( (T) T* \)

\( (T) T* \) Final pitch accent with lengthening \( H^* \), \( L^* \), \( H^* \)

\( L \) Hi Initial accent

- Rhythmic beat (reminiscence of lexical accent) → foot head

but: differences in frequency and salience: OC > MF > NF

Need for ip in OC and MF (and NF?)

Prosodic autonomy perceived as intermediate between AP and IP

Boundary tones within IP

Gallo-Romance prosodic hierarchy:

CONSTITUENTS

INTONATION PHRASE (ip)
INTERMEDIATE PHRASE (ip)
ACCENTUAL PHRASE (AP)

MARKERS

Nuclear accent, %, lengthening
T-, downstep blocked, lengthening
Final accent, lengthening
Rhythmic beat

SYLLABLE

Vocalic nucleus

References


