Introduction

• Articulation rate:
  - Space at which segments are produced without considering pauses
  - Expressed in syll/sec or in ms/syll (Grosjean & Deschamps, 1975; Miller et al., 1984)
  - Some factors affecting articulation rate:

<table>
<thead>
<tr>
<th>Dialectal variety</th>
<th>Speaker’s age and gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech style</td>
<td>Utterance length</td>
</tr>
</tbody>
</table>

Goal

• To examine the effect of dialectal variety, speaking style and utterance length on the articulation rate in French, by taking into account the speakers’ age and gender

Data analysis

• Automatic alignment in syllables (EasyAlign; Goldman, 2011) and manual verification
• Identification of the Accentual Phrases (AP; Jun & Fougeron, 2002)
• Exclusion of disfluent syllables and APs of less than 2 syllables
• For each AP, number of syllables and calculation of articulation rate in ms/syll ⇒ Syllabic duration
• Statistical analysis:
  - Generalized linear model on syllabic duration
  - Predictors: dialectal variety (S-NY, S-NE, S-GE, S-MA, B-BL, B-BT, F-LY, F-PA), speakers’ age and gender, speech style (reading/conversation) and number of syllables in the AP

Results

• Effect of dialectal variety
  - Syllabic duration is shorter (i.e. articulation rate is faster) in French and Belgium varieties than in Swiss varieties, except in S-MA variety
  - No difference between French and Belgium varieties

• Effect of extra-linguistic variables
  - Effect of gender
    ⇒ Syllabic duration is shorter for males than females
    ⇒ The difference between males and females is not similar across all varieties (i.e. stronger in F-PA and B-BT than in the other varieties).
  - Effect of age
    ⇒ Syllabic duration increases with age, but in a stronger way in the Swiss varieties (except S-MA) and in F-LY than in F-PA and Belgium varieties

• Effect of speech style
  ⇒ Syllabic duration is shorter in conversation than in read speech
  ⇒ The differences between the varieties are more salient in reading than in conversation

• Effect of the utterance length (number of syllables in the AP)
  ⇒ Syllabic duration decreases when the number of syllables within the AP increases
  ⇒ The effect of the number of syllables is stronger in reading than in conversation
  ⇒ The effect of the number of syllables is not similar across all the varieties (i.e. weaker in the F-PA than in the other varieties)

Conclusions

⇒ French speakers articulate faster than Swiss speakers (except S-MA), but not than the Belgian speakers

• Influence of the extra-linguistic variables
  - Males articulate faster than females, especially in the F-PA and in the B-TO groups
  - Age has a stronger effect in the Swiss varieties (except in S-MA) and in F-LY than in the other varieties

• Influence of speech style and utterance length
  - Articulation rate is faster in conversation than in reading
  - Careful reading?
  - The differences between the varieties are more noticeable in reading than in conversation
  - The longer the utterance (AP), the faster the articulation rate