Have a break: Aging effects on sentence production and structuring in French
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BACKGROUND

• Physiological changes due to aging
  • With increasing age:
    o Ribcage cannot expand and contract as well and diaphragm becomes weakened [1];
    o Larger lung volume to initiate speech, longer sentences split into smaller units [2, 3]

MOTIVATION

• Effects of aging on prosodic structuring are relatively sparse and limited to English;
• Cover repair mechanisms and adaptations to the speech system

How does aging affect prosodic structuring in French?

Fig. 1: Example of a ‘long-complex’ sentence produced by an older speaker.

RESULTS

(A) Pause duration

- Longest pause durations in both groups for long-complex
- Longer pause durations in all conditions for older than younger speakers

(B) Articulation rate

- Speakers with the slowest articulation rate produced the longest pauses:
  - Slower articulation rate for older than younger speakers

(C) Sentence duration

- The longer and complex a sentence, the longer its duration:
  - Age-effect even more visible

DISCUSSION AND CONCLUSION

- Both length and complexity affect durational patterns in younger and older speakers
- Age entailed an additional increase in duration (of e.g. whole sentences, and even pauses)
  o Possible explanations:
    1. (a) A mechanism to make sure to reach the targets properly [5]
    2. (b) A slower speech rate for e.g. long-complex sentences can be explained by increased cognitive demands [6]
  o Link to breathing will be of main interest in future studies

This study shows that:

1. All age groups produce phrasal breaks at expected syntactic boundaries
2. Older speakers produced much longer pause breaks, slower articulation rates and longer sentence durations than the younger ones

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