Variation in prosodic planning among individuals and across languages
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**BACKGROUND**

- Previous research (Swets et al., 2007; Petrone et al., 2011) found associations between working memory (WM) and the amount of prosodic material readers and speakers package together for comprehension and production.
  - Larger WM capacity seems to lead to larger prosodic packages during speech planning: Petrone et al. (2011) showed that the scope of incremental prosodic planning increased along with WM.
  - However, Petrone et al. did not distinguish WM effects from processing speed, and had participants read prepared utterances rather than plan their own speech.
- Although previous studies have found associations between WM and planning scope in language production (Swets et al., 2014, Petrone et al., 2011) in different languages, no studies have assessed such effects cross-linguistically in the same study.
- **RESEARCH QUESTIONS:** Is the size of prosodic increments during language production, as measured by the occurrence of pauses, associated with individual differences in WM and speed of processing?

**METHOD**

French (n = 32), German (n = 31) and English (n = 30) speakers described 3-object arrays with similar-looking (contrast) or different (control) objects in Positions 1 and 3.

**Contrast Condition**

TARGET UTTERANCES

- Contrast: "The **four-legged cat** moves below the train and the **three-legged cat** moves above the train."
- Control: "The cat moves below the train and the wheel moves above the train."

**PROCEDURE**

- Experimenter served as addressee: Moved objects around in Powerpoint to match descriptions.

**RESULTS**

Mean speech onset time varied across languages, but did not vary as a function of WM or processing speed (SE in parentheses):

<table>
<thead>
<tr>
<th>Language</th>
<th>Contrast</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>French</td>
<td>2.15 (.26)</td>
<td>1.45 (.08)</td>
</tr>
<tr>
<td>German</td>
<td>3.36 (.27)</td>
<td>1.82 (.09)</td>
</tr>
<tr>
<td>English</td>
<td>2.97 (.27)</td>
<td>1.80 (.09)</td>
</tr>
</tbody>
</table>

Although speed of prosodic increment varied with contrast sentence pauses in French, this pattern did not hold in German or English.

**REFERENCES**


