

Syllabic Pseudohomophone Priming in Tip-Of-the-Tongue States Resolution:

The Role of Syllabic Position and Number of Syllables

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Tip-Of-the-Tongue (TOT) state: common experience characterized by the incapability of retrieving a familiar word, usually coupled with a frustrating feeling. It is thought that TOTs occur when the semantic and syntactic information of the word is retrieved but not its phonology (e.g., Burke, Mackay, Worthley, & Wade, 1991; Dell, Chang, & Griffin, 1999; Levelt, Roelofs, & Meyer, 1999).

This study aims to analyze the role of the phonological syllabic position (first vs. last), and number of syllables (two, three and four syllable long words), in TOT states resolution.

Hypothesis: (1) primes phonologically related to the TOT word by the first syllable will improve TOT resolution;

(2) larger number of induced TOTs and higher rate of TOT resolution is expected for words with higher number of syllables.

Participants:

150 EP monolinguals
124 female
M=20.65 years, SD=2.28

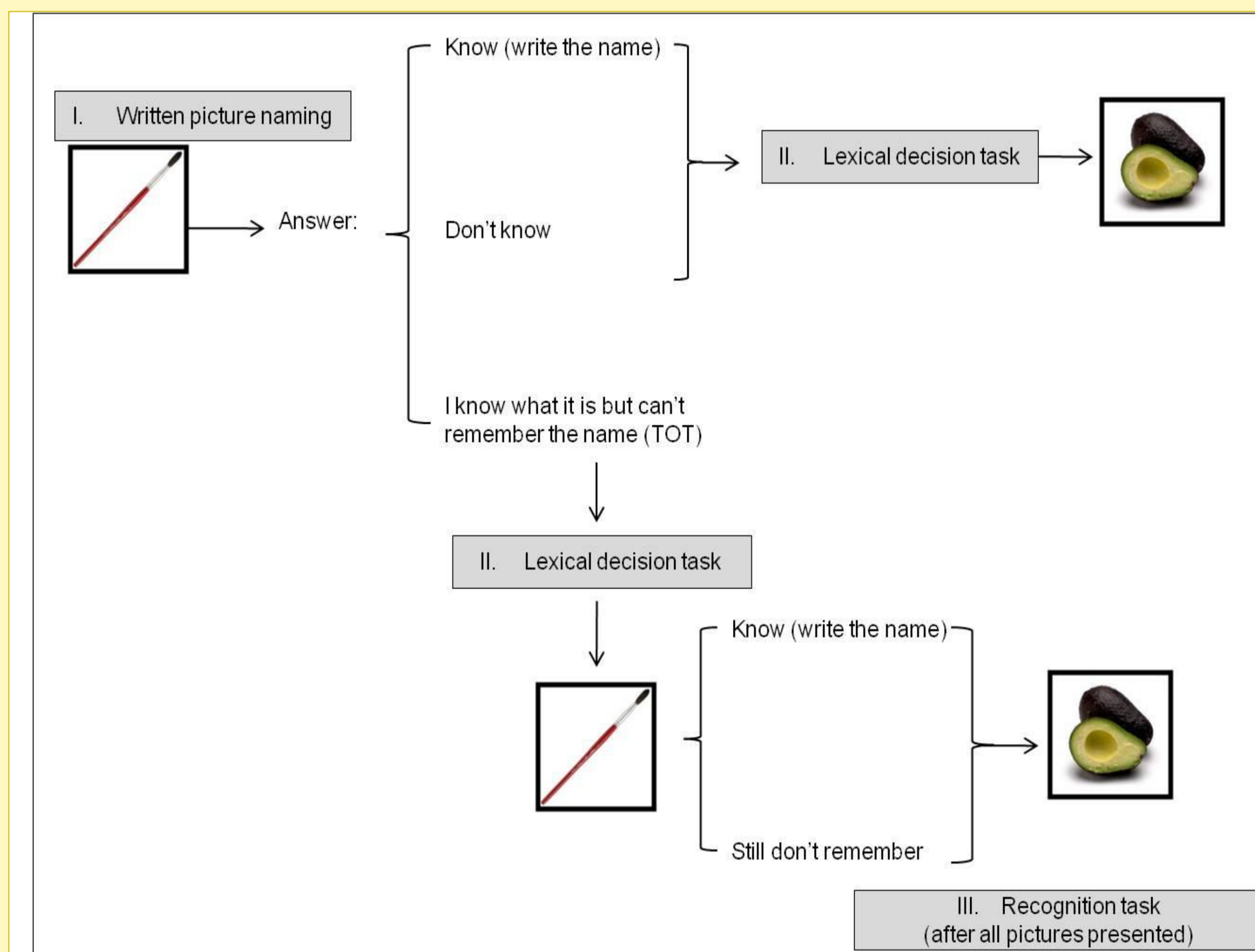


Figure 1 – Experimental procedure used to induce TOT.

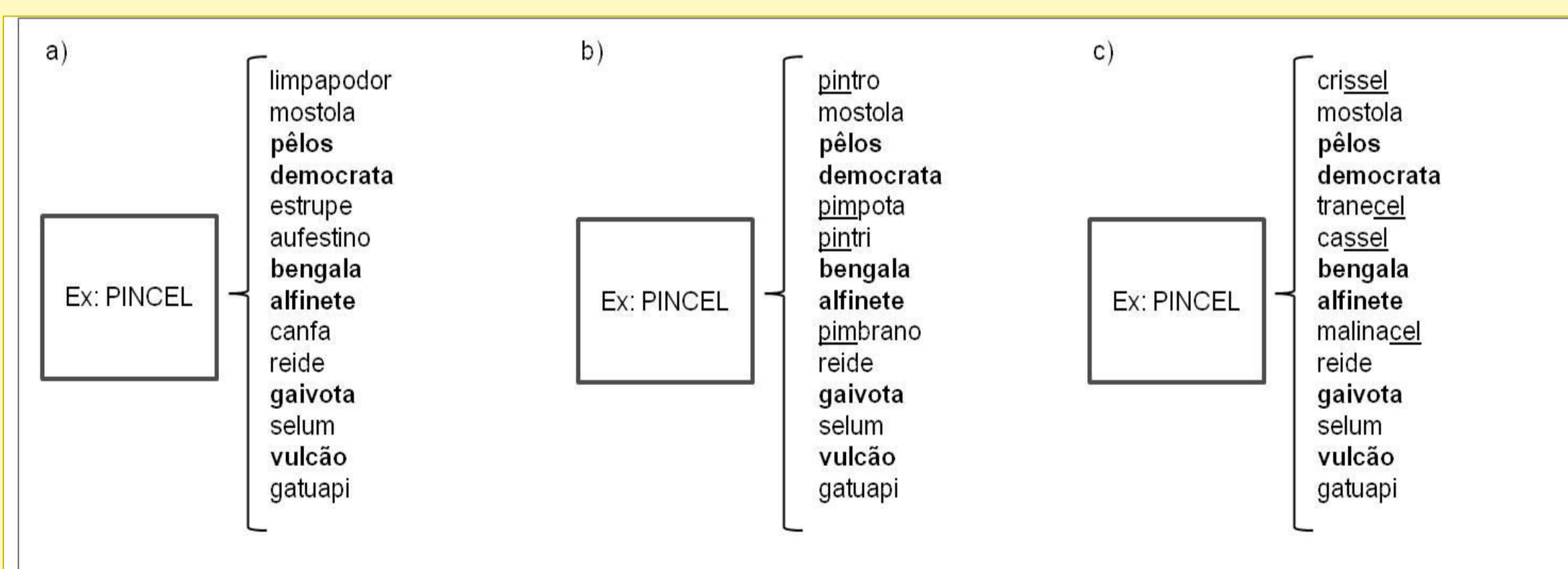


Figure 2 – Example for the target word *Pinçel* (paintbrush) where (a) represents the words and pseudowords presented for the Control Group, (b) represents the words, pseudowords and syllabic pseudohomophones presented for the First Syllable Group, and (c) represents the words, pseudowords and syllabic pseudohomophones presented for the Last Syllable Group.

Design:

3 syllable groups: control, first, last

99 target words (pictures) with 2, 3, or 4 syllables, controlled for frequency ($F(2,78)=.97, p=.384$), familiarity ($F(2,23)=.77, p=.476$), and NA ($F(2,97)=.11, p=.899$).

Results:

TOT induction

- 13.6% of TOT states;
- Statistically significant differences for number of syllables, $F(2,96)=10.00, p<.001$;
- 72.1% of positive TOTs.

TOT resolution:

- Main effect of number of syllables ($F(1,188,276.34)=38.30, p<.001$; $F(2,96)=9.10, p<.001$)
- Main effect of syllabic position ($F(1,2,147)=20.92, p<.001$; $F(2,173,166.12)=149.60, p<.001$)
- Interaction effect ($F(1,3.76,276.34)=8.48, p<.001$; $F(2,3.46,166.12)=6.63, p<.001$)

Post-analysis:

The ANCOVA considering syllable frequency and neighbourhood density as covariates, showed an effect of number of syllables ($F(2,160)=11.30, p<.001$) and a marginally significant effect of syllabic position ($F(1,160)=3.23, p=.074$). The effects of each covariate were not statistically significant.

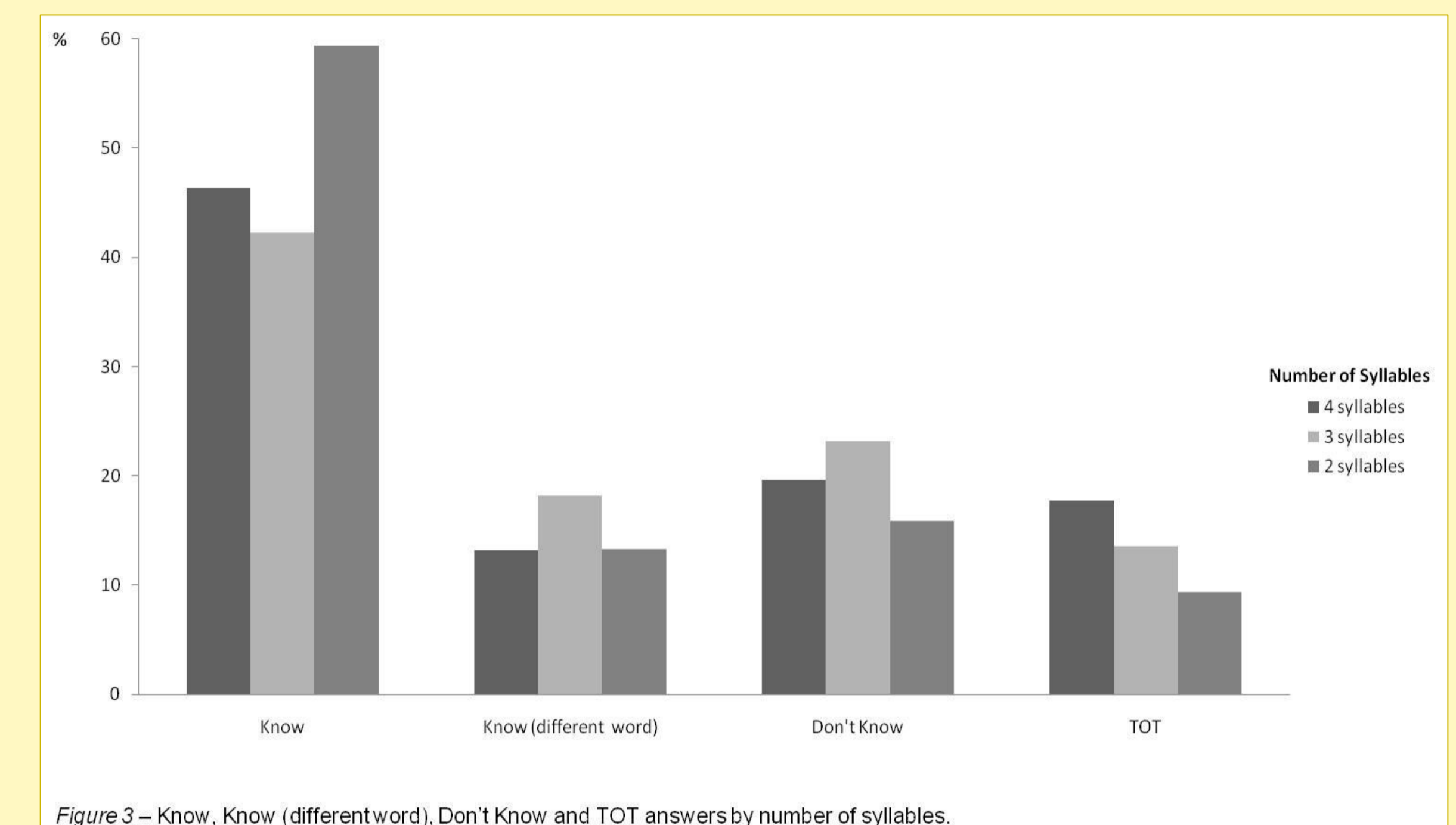


Figure 3 – Know, Know (different word), Don't Know and TOT answers by number of syllables.

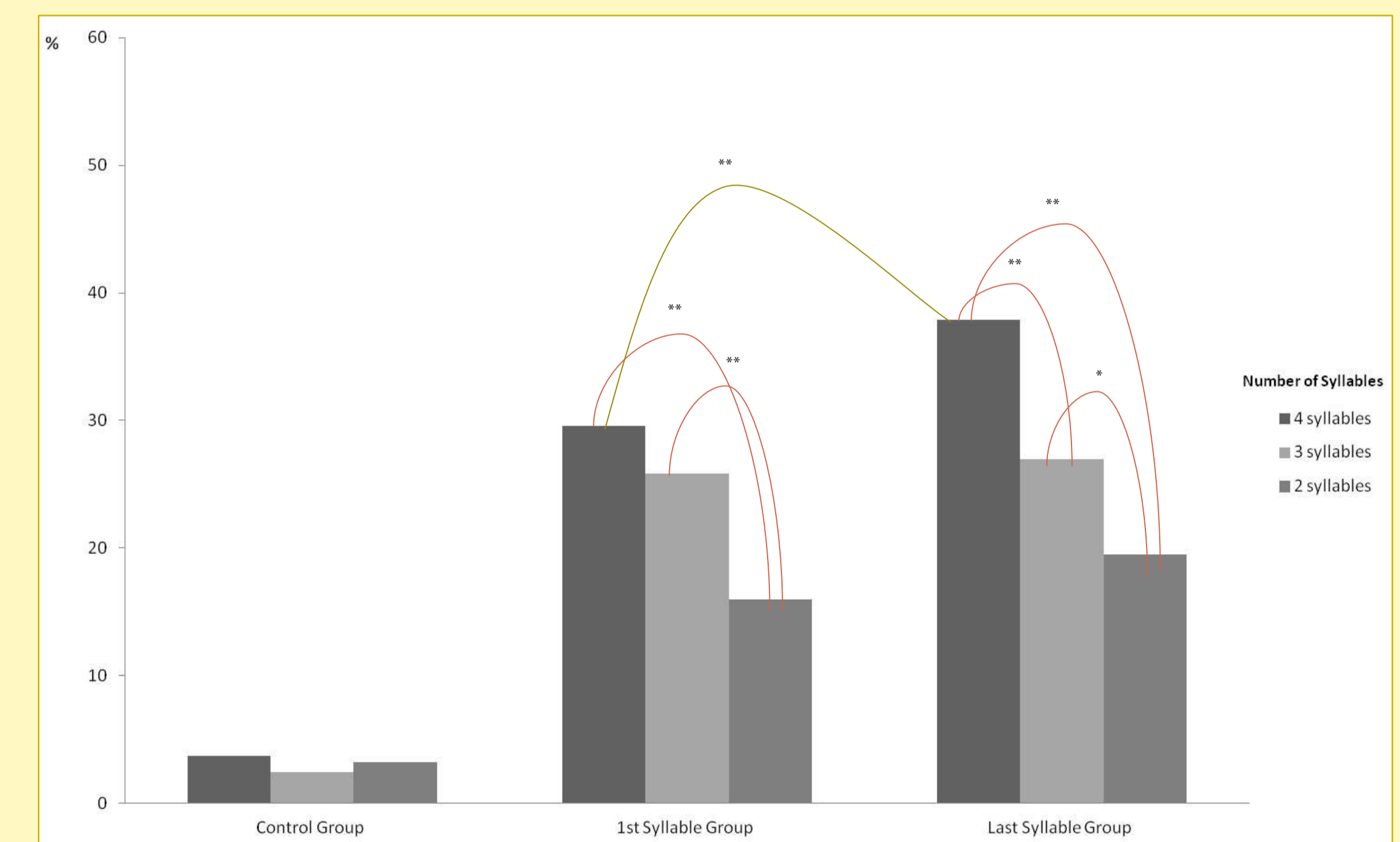


Figure 4 – Percentage of TOT resolution by Syllabic Group (Control, First Syllable and Last Syllable) and Number of Syllables (two, three or four-syllables). ** represents differences statistically significant by subjects and items analysis.

Results showed a significant syllabic pseudohomophone priming effect facilitating TOT resolution. The effect was stronger for four-syllable long words, especially when the last syllable was used as prime. These results seem to reinforce the importance of phonology in TOT states resolution, particularly the role of the syllable as an important sublexical unit in speech processing.