The young and the meaningless: Novel-Word Learning Without Meaning Or Sleep
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### Theoretical motivation

What does it take for a novel word-form to become lexically integrated?
- What kind of information is required?
- What kind of training is required?

By examining these factors we get closer to understanding the process of novel word learning.

### Background

- Words have the property of interacting with other words and with phonological representations.
- Learning a novel word entails the development of such properties.
- Specifically, learning a novel word entails linking its phonological word-form with:
  - Its sub-lexical features
  - Other lexical representations
- Once learned, these “linkages” allow the newly learned word to interact with its features and with other words (e.g. inter-lexical inhibition).

**Question:**
- What does it take for these links to form?
- Gaskell & Dumay (2003): meaning is not necessary for a newly learned word (e.g. cathedral) to inhibit a similar known word (e.g. cathedral).
- Effect only showed up 2 days after the first exposure.
- Lindsay & Gaskell (2012): sleep is not necessary.
- But interleaved exposure to neighboring known words is.

### Method

**Subjects:** 36 undergraduate students

**Materials:** 20 monosyllable non-words (e.g. sook)
- Each has two real words differing only in the place of articulation of the final stop consonant.
- 20 triplets in total

<table>
<thead>
<tr>
<th>sook</th>
<th>suit</th>
<th>soup</th>
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### Results

- Looks to the target were significantly slower in the trained-compared to the untrained-non-word-splice condition (p = .014).
- Trained-non-word-splice was not significantly different from word-splice (p = .695).

### Work in progress:

- Only phoneme-monitoring in training (no production)

### Conclusions

- CAM cuing a trained novel word slowed down activation of the target word, whereas the exact same physical stimulus did not have the same effect when the CAM cued an untrained non-word.
- This indicates that lexical engagement does not require:
  - Meaning.
  - Time-consuming lexical consolidation (with or without sleep).
  - Interleaved exposure to old and new words.
- Lexical competition is a form of lexical engagement that plays a critical role in resolving acoustic ambiguity (McMurray, Tanenhaus & Aslin, 2009; McMurray et al, 2009). Our results indicate that this competition can stem from a minimally experienced phonological sequence that is not semantically integrated.

### References


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**Finding:** By examining these factors we get closer to understanding the process of novel word learning.