Introduction

- **Perceptual learning** and **word learning** are both essential processes for understanding non-canonical speech but involve different mechanisms.
- Converging evidence suggests that training on diverse stimuli impairs item learning in the short term but leads to more generalizable learning [1].

**Question:** Does training stimulus diversity affect the balance between perceptual and word learning?

**Hypothesis:** Participants exposed to a wider range of stimuli will engage in more perceptual learning and less word learning. And vice versa.

Methods: Training Phase & Test Phase

- Online participants (n = 101) heard words and pseudowords spoken by accented and canonical talkers, following semantically constraining sentences. Prior context encouraged perceptual and word learning by disambiguating speakers’ intended meaning.
- Participants then rated spoken item reasonability given the preceding sentence.

**Trial Format**

- Participants heard old and new word forms, either from a consistent speaker and accent condition or a different speaker and accent condition.
- They then completed word report, item memory, and (for pseudowords) meaning inference tasks.

Results: Perceptual Learning

- Both the high and medium diversity groups showed a trained accent advantage in perceptual learning for the trained accent—exclusively for words (ps < 0.05).

Results: Word Learning

- All groups performed above chance for recognition memory. The only significant between group difference was higher performance in the low versus the high diversity group (p = 0.002)

Conclusion

- The results suggest a trade-off between perceptual and word learning: at high training diversity, perceptual learning is enhanced and word learning is hindered. The opposite trend occurs for a less varied training set.
- Intermediate diversity conferred advantages for both forms of learning.