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The Influence of Unitization on Recognition Memory

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Introduction

Previous research on recognition memory assumes that associative recognition relies on recollection, whereas item recognition relies on a combination of recollection and familiarity.

Unitization refers to the encoding strategy where two separate items are perceived as a single coherent entity or object.

Research has demonstrated that unitization can facilitate familiarity-based recognition by generating representations of the stimulus and integrating it into a unified whole. In this case, associative recognition can be supported by familiarity.

To investigate this issue, we examined the effect of unitization on memory for word-pairs through two types of tests:

Associative Recognition	**Item Recognition**
judge whether word pairs occurred together	judge whether single words are old or new

Method

Participants
N = 180

Procedure:

- Participants were randomly assigned to either a high or low unitize condition and an item or associative recognition test.
- Participants were presented with pairs along with a fictional definition (the high-unitize condition) of the new "word" or with a sentence frame (the low-unitize condition).
- Participants were immediately tested after the encoding phase.

STUDY:

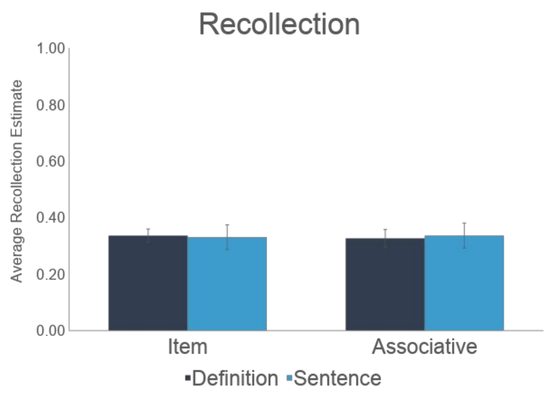
High Unitize (Definition)	SHAME RIBBON an embarrassing ornament worn as punishment BAD DEF. 1 2 3 4 GOOD DEF.
Low Unitize (Sentence)	He looked down in ___ as the ___ was awarded to a faster runner. shame ribbon BAD FIT 1 2 3 4 GOOD FIT

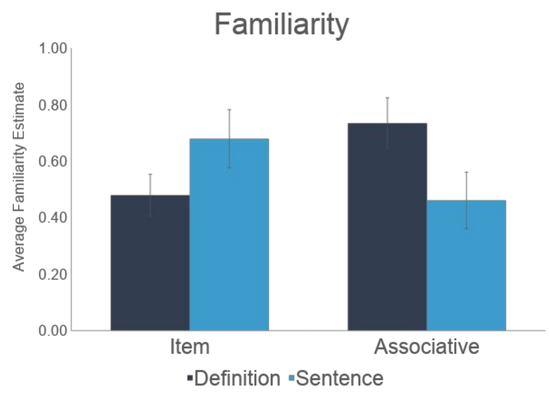
TEST:

Item Recognition	RIBBON Sure New 1 2 3 4 5 6 Sure Old
Associative Recognition	SHAME GRADE Sure Rearr. 1 2 3 4 5 6 Sure Intact

Preliminary Results

Preliminary results indicate that the manipulation had no effect on recollection, but changed the role that familiarity played in supporting recognition. Specifically, the definition condition led to more familiarity in associative recognition and less in item recognition, whereas the opposite was true for the sentence frame condition.





Discussion & Future Directions

The current study demonstrated that unitization selectively boosts the strength of familiarity and benefits the performance of associative recognition.

Moreover, item recognition was not improved by high unitization suggested unitization should not be considered as a memory strengthening effect, but a specialized form of encoding.

The result of this study will be used to prepare a subsequent research which examines the different forgetting patterns for the item and associative information under unitization and sentence frames.