



## INTRODUCTION

- Most new words are learned incidentally by using surrounding linguistic context to infer meaning<sup>1</sup>
- Word class (i.e., noun vs. verb) might influence success in meaning identification
  - Differences in semantic organization: nouns have a hierarchical semantic organization, whereas verbs have a matrix-like organization<sup>2</sup>
  - Variability in word meaning: verb meanings vary more than nouns<sup>3</sup>

## PURPOSE

Examine the types of errors made during an incidental semantic learning task to better understand how word class differences affect meaning identification

## METHODS

### Participants

- Monolingual English speakers with normal hearing and no history of language delays or disorders
- 61 adults, ages 18-29
  - **Verb:**  $n = 26$ ,  $M_{age} = 20;11$
  - **Noun:**  $n = 35$ ,  $M_{age} = 21;3$

### Incidental Semantic Learning Task

- 100 sets of three sentences ending with a nonword that shared meaning with a common noun or verb
- Each sentence set was followed by the questions: “Does the word have meaning? If so, what is it?”
- Each participant completed two conditions:
  1. **Meaning+** (50 sets):
    - Meaning of the nonword was consistent across all three sentences of a set
    - Cloze probability of each sentence increased across set
  2. **Meaning-** (50 sets):
    - Meaning of the nonword varied across all three sentences of a set
    - Each sentence had low cloze probability

## ERROR CODING

- Incorrect responses for the nonword's meaning were coded in two different ways:
  - **Semantic Errors:** How the meaning provided was semantically-related to the target meaning (Meaning+ only)
  - **Contextual Errors:** Which sentence(s) from the set that the meaning fit in best (Meaning- only)

Meaning+ Sentence Set Example	Semantic Code	Example
1. To stay healthy you should <i>lesh</i> . 2. In gym class, our teacher made us <i>lesh</i> . 3. In track you have to <i>lesh</i> .  (Correct response = <i>run</i> )	Synonym	<i>sprint</i>
	Hyper/hyponym	<i>exercise</i>
	Opposite	<i>rest</i>
	Out-of-category	<i>eat</i>
	Within-category	<i>walk</i>
	No meaning	<i>none</i>

Table 1. Example Responses of Semantic Codes for Meaning+ Sets

Meaning- Sentence Set Example	Contextual Code	Example
1. He spilled food on his <i>goot</i> . 2. Before bed, I have to take a <i>goot</i> . 3. When I was a baby, that was my <i>goot</i> .  (Correct response = “The word has no meaning”)	Does not fit in any sentence	<i>dark</i>
	Fits best in 1 <sup>st</sup> sentence	<i>pants</i>
	Fits best in 2 <sup>nd</sup> sentence	<i>shower</i>
	Fits best in 3 <sup>rd</sup> sentence	<i>nickname</i>
	Fits well in 2+ sentences	<i>toy</i>
	Most similar to nonword	<i>boot</i>

Table 2. Example Responses of Contextual Codes for Meaning- Sets

## DISCUSSION

- Overall, more errors for verbs than nouns
  - More likely to provide an incorrect meaning for verbs than nouns
  - Supports previous research suggesting that verbs are more difficult to learn than nouns

### Semantic Errors

- Most common response for verbs and nouns was “No Meaning”
  - Suggests a risk-averse approach to word learning
- Second most common responses were **out-of-category** for verbs and **within-category** for nouns
  - Suggests that the underlying differences in semantic organization between nouns and verbs might play a role in word learning
- Responses were just as frequently synonyms or hyper/hyponyms of target meanings for both nouns and verbs but meanings opposite of target meanings were only provided for verbs

### Contextual Errors

- Most of the incorrect meanings provided for both word classes fit well in two or more sentences
  - Participants were willing to ignore conflicting evidence of meaning to identify one
- Nouns and verbs had similar error patterns across all error categories (except for “Fits best in 1st sentence” category)
- Future research should explore how much supportive evidence is needed to form a meaning in the face of contrary evidence of the meaning

## CONCLUSION

Word class influences both the amount and type of errors made during word learning, with a larger amount and more out-of-category meanings identified for verbs than nouns, even when contradictory evidence of the meaning is encountered

## REFERENCES & FUNDING

1. Nagy, W. E., Herman, P. A. & Anderson, R. C. (1985). Learning Words from Context. *Reading Research Quarterly*, 20, 233-25
2. Huttenlocher, J., & Lui, F. (1979). The semantic organization of some simple nouns and verbs. *Journal of verbal learning and verbal behavior*, 18(2), 141-162.
3. Gentner, D. (1981). Some interesting differences between nouns and verbs. *Cognition and Brain Theory*, 4, 161-178.

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## RESULTS

	Verbs		Nouns	
Meaning+	30.77%		23.26%	
	Incorrect Meaning: 17.31%	No Meaning: 13.46%	Incorrect Meaning: 11.43%	No Meaning: 11.83%
Meaning- (Incorrect Meaning)	19.46%		10.51%	

Table 3. Percentage of Total Errors by Word Class

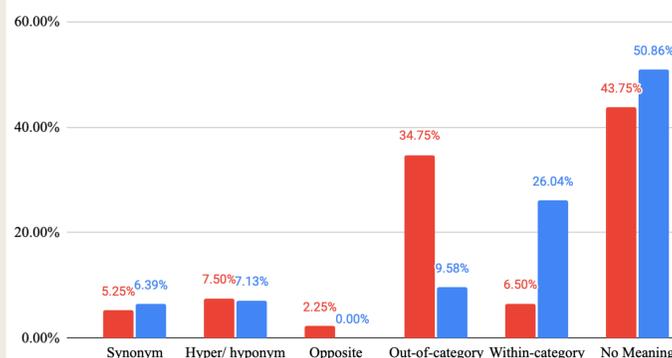


Figure 1. Semantic Coding of Meaning+ Errors

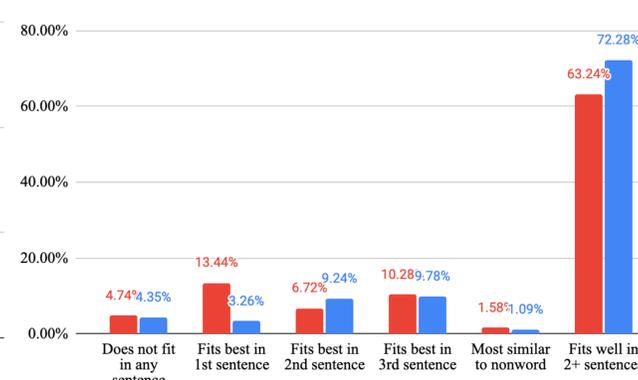


Figure 2. Contextual Coding of Meaning- Errors