


Semantic Influences on Quick Incidental Verb Learning

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Incidental Word Learning

- The ability to learn new words without
 - direct instruction
 - extensive repetition
- Typically investigated through
 - Fast Mapping (e.g., Carey & Bartlett, 1978)
 - Quick Incidental Word Learning (QUIL, Rice & colleagues)

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Incidental Word Learning

- A developmental skill
 - appears during the second year of life
 - @ 18 - 24 months (e.g., Hollich et al., 2000, Mervis & Bertrand, 1994)
- Difficult for children with language impairments
 - especially with learning verbs (e.g., Eyer et al., 2002; Rice, Oetting, Marquis, Bode, & Pae, 1994)

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Linguistic Influences on Incidental Word Learning

- Phonological (e.g., Storkel, 2004; Storkel & Morrisette, 2002)
 - It is easier to learn novel words that have higher degrees of
 - Phonotactic Probability
 - common sequences of phonemes
 - Neighborhood Density
 - known lexical items that differ by one phoneme

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Linguistic Influences on Incidental Word Learning

- Morphosyntax (e.g., Bedore & Leonard, 2000)
 - It is easier to learn novel words that are
 - heard with consistent morphology
 - tested with consistent morphology

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Linguistic Influences on Incidental Word Learning

- Semantic (e.g., Landau, Smith, & Jones, 1998; Smith, 2000)
 - Mostly on aspects of nouns
 - shape & animacy
 - Shape bias
 - children generalize newly learned nouns to objects with similar shapes
 - Very little work with verbs

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Present Investigation

1. Does a child's familiarity with a novel verb's action influence its learnability?
2. Is retention of newly learned verbs affected by familiarity with the action?

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Present Investigation

- Compared QUIL of two types of verb actions
 1. Actions with Basic Level Labels (A+BLL)
 2. Actions without Basic Level Labels (A-BLL)

Basic Level Label

- the most psychologically salient tier within a hierarchy
- for manner of motion verbs: walk, run, skip, jump

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Present Investigation

- Actions with Basic Level Labels (A+BLL)
 - actions that can be correctly labeled by a basic level verb
 - examples
 - the movement of frolicking ⇒ skip
 - the movement of strutting ⇒ walk
- Actions without Basic Level Labels (A-BLL)
 - actions that cannot be correctly labeled by a basic level verb

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Present Investigation

- Why would A+BLL be easier to learn?
 - Language learning often moves from familiar to novel
 - Lexical Principal
 - Contrast
 - children seek out a referent whose meaning differs from known words
 - the relationship between the BLL and the novel action provides the contrast

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Present Investigation

- Why would A-BLL be easier to learn?
 - Novel actions are more salient
 - Lexical Principal
 - Mutual Exclusivity
 - words cannot have more than one label
 - novel label would apply to A-BLL but not to A+BLL

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Present Investigation

- Why would A+BLL and A-BLL be equally easy/difficult to learn?
 - Lexical Principal
 - Novel Name-Nameless Category
 - children seek out a referent that they do not have a label for
 - label exclusivity, however, is not presumed

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Participants

- 16 4-year-olds
 - an age of good, but not excellent, quick incidental verb learning skills
 - 10 males, 6 females
 - all Caucasian
 - a limitation
 - however, race & ethnicity have not previously been correlated with incidental word learning

Participants

- All of the participants
 - passed hearing and language screenings
 - monolingual, native speakers of English
 - no parental concern for current language skills

Method

■ Each child was seen individually

Session 1 Hearing & language screening	Session 2 Blank-comparison training & testing	Session 3 Follow-up QUIL task
Labeling task	QUIL task	
Blank-comparison training & testing		

Method

■ QUIL Task

- Similar to Brackenbury & Fey (2003)
- 6 vignettes
 - each featured a different target verb
 - 3 A+BLL: Frolic, Strut, Trudge
 - 3 A-BLL: Plusape, Spleak, Throak
 - presented in one of three random orders
 - verb actions shown for @ 120 seconds
 - verb label spoken 13 times

Method

■ QUIL comprehension testing

- done following each verb's vignette
- Identification questions

“Find Plusaping”

Unfamiliar action mincing	Familiar action marching
Black square “none of the others”	Target action plusaping

Results

Action Type	Initial QUIL	Follow-up QUIL
A+BLL	1.00 (0.82)	1.13 (1.26)
A-BLL	1.13 (0.96)	1.38 (0.89)
All Actions	2.13 (1.54)	2.50 (1.46)

* Wilcoxon Signed Rank comparisons revealed no significant differences ¹⁸

Results

- Learning rates comparable to earlier studies (e.g., Brackenbury & Fey, 2003)
- No significant correlations between QUIL and
 - age
 - gender
 - parent education
 - language screening

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Results

- Retention patterns
 - Initial vs. Follow-up QUIL (total # of verbs learned)
 - No difference n = 7
 - Initial QUIL better n = 3
 - Follow-up QUIL better n = 6
 - Suggests that
 - more may have acquired than initially shown
 - semantic organization without increased input

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Discussion

- For 4-year-olds
 - familiarity with an action does not appear to have a significant impact on verb learning
 - either for initial learning or retention
 - Novel Name-Nameless Category may be a predominant lexical principle
 - semantic organization/acquisition may continue after the initial experience

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Clinical Implications

- There are a number of issues to be concerned with regards to word learning
 - phonology
 - morphosyntax
- familiarity with a verb's action does not appear to be one of them

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Bonus Clinical Implications

Brackenbury, T., & Pye, C. (Scheduled January 2005). **Semantic deficits in children with language impairments: Issues for clinical assessment.** Language, Speech, and Hearing Services in Schools.

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Handouts

Copies of this handout are available from my website.

1. Google search: Tim Brackenbury
 - my site should be the first result
2. http://www.bgsu.edu/departments/cdis/cdis_content/faculty/brackenbury.html

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