

Seeing Stems Everywhere and Being Blind To Affixes

Positional Effects in Morpheme Identification

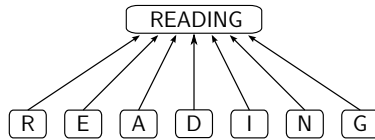
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Crepaldi, Rastle, Davis & Lupker Stem and affix position coding

Notes

Letter position



- ▶ We are able to distinguish between READ and DEAR
- ▶ So intense work on letter position coding

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Notes

Pre-lexical morphology

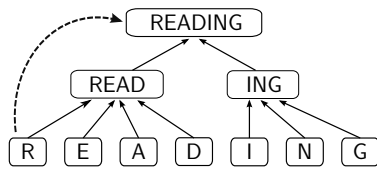
Morphological effects in nonword processing

- ▶ DEJUVENATE slower to reject than DEPERTOIRE (Taft & Forster, 1975)
- ▶ CANTEVI (bayed) slower than CANTOVI (buyel) (Caramazza et al., 1988)
- ▶ RAPIDIFIER (quickify) primes RAPID (quick) (Longtin & Meunier, 2005)

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Morpheme position



- ▶ We are able to distinguish between OVERHANG and HANGOVER
- ▶ Intense work on morpheme position coding?

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Crepaldi, Rastle & Davis, 2010

Main finding

- ▶ GASFUL slower to reject than GASFIL, but FULGAS as quick as FILGAS

Interpretation

- ▶ Suffix identification is position-specific

Generalization

- ▶ Is it the case that the word identification system picks up positional regularities in the morpheme distribution?

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Experiment 1

Features of the study

- ▶ Lexical decision
- ▶ Morpheme interference effect (Taft & Forster, 1975)

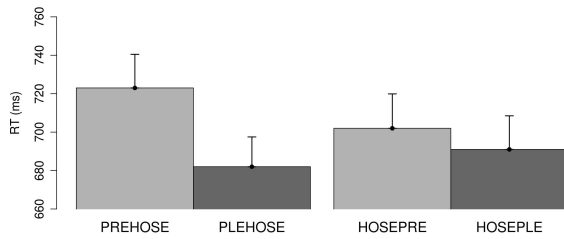
Design

- ▶ PREHOSE vs. PLEHOSE vs. HOSEPRE vs. HOSEPLE
- ▶ Critical nonwords matched for length in letters, number of syllables, *MLBF*, *N*, and Levenshtein distance

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Results



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Stem positional features

CATFISH vs. WILDCAT, PICKPOCKET vs. TOOTHPICK

- ▶ Suggestive evidence that English reversed compounds are slower to reject than pseudo-compounds (Shoolman & Andrews, 2003; Taft, 1985)
- ▶ Chinese transposable compounds take longer to be accepted as existing words than non-transposable compounds (Taft et al., 1999)
- ▶ Constituent priming in Basque compounds across position (Duñabeitia et al., 2009)

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Experiment 2

Features of the study

- ▶ Lexical decision
- ▶ Morpheme interference effect (Taft & Forster, 1975)

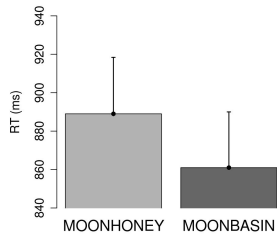
Design

- ▶ MOONHONEY vs. MOONBASIN
- ▶ Critical nonwords matched for length in letters, number of syllables, *MLBF*, *N*
- ▶ Constituents matched on length, frequency (written and spoken), *N*, and strength of semantic association

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Results



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Experiment 3

Features of the study

- ▶ Masked priming
- ▶ 8-letter target words, either monomorphemic or compound
- ▶ Shifted-halves primes vs. unrelated random letter strings

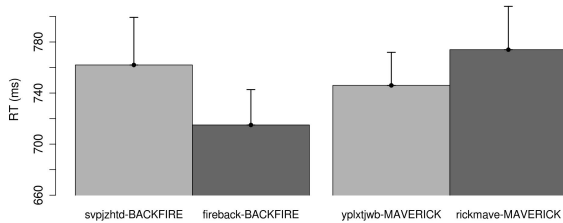
Design

- ▶ fireback-BACKFIRE vs. svpjzhtd-BACKFIRE
- ▶ rickmave-MAVERICK vs. ytlxpjwb-MAVERICK

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Results



Crepaldi, Rastle, Davis & Lupker Stem and affix position coding

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To wrap up

- ▶ Suffixes are identified only at the end of word-like strings
- ▶ Prefixes are identified only at the onset of word-like strings
- ▶ Free stems are identified everywhere

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Theoretical implications

Statistical learning

- ▶ The word identification system captures positional regularities in the morpheme distribution

Stems vs. affixes

- ▶ No clear differentiation between types of morphemes in most recent theories (Baayen et al., 2011; Crepaldi et al., 2010; but see Taft, 2006)

Position coding

- ▶ Bigrams vs. spatial coding

Crepaldi, Rastle, Davis & Lupker Stem and affix position coding

Notes

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- ▶ Data were collected by Pietro Barbieri-Hermitte, Lara Hemsworth, Tasha Williamson and Lindsay Chan

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