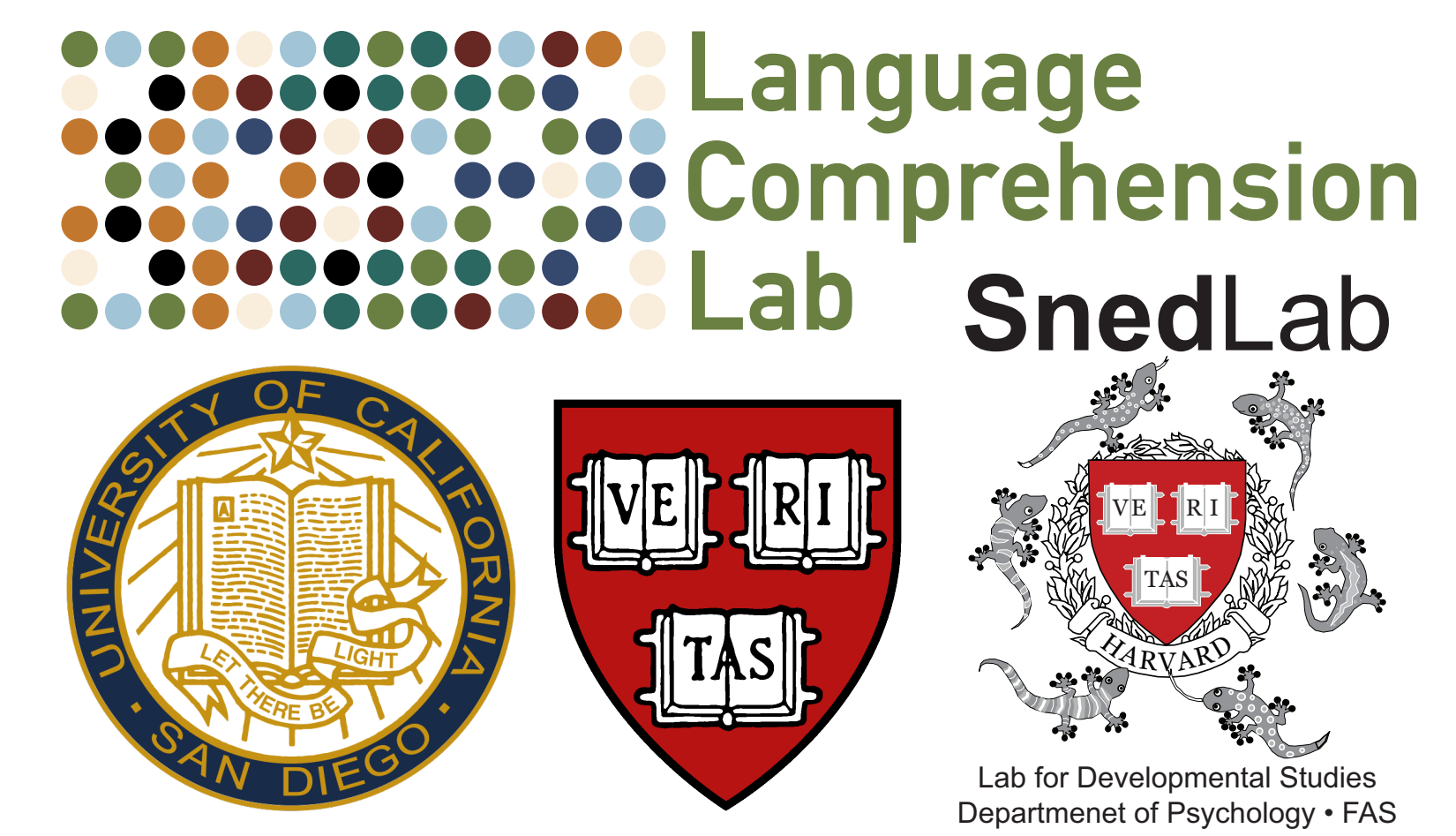


Different paths from structure to event construal in idiomatic, semi-idiomatic, and fully transparent expressions

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1. Introduction

- **Structural priming**: tendency to repeat aspects of structure across sentences (Bock, 1986)
- Most priming reducible to **parallel surface syntax** (Bock, 1989; Bock & Loebell, 1990; for discussion, see Branigan & Pickering, 2016; Pickering & Ferreira, 2008)
- Seemingly also sensitive to **thematic roles** (e.g., Hare & Goldberg, 1999; Chang, Bock, & Goldberg, 2003; Cai, Pickering, & Branigan, 2012; Köhne, Pickering, & Branigan, 2014)
- But open to **other interpretations**
 - Prepositional overlap (for Chang et al., 2003; see Bencini, Bock, & Goldberg, 2002)
 - Animacy (for Cai et al., 2012; Hare & Goldberg, 1999; see Bock, Loebell, & Morey, 1992; Gámez & Vasilyeva, 2015)
 - Morphosyntax (for Köhne et al., 2014)

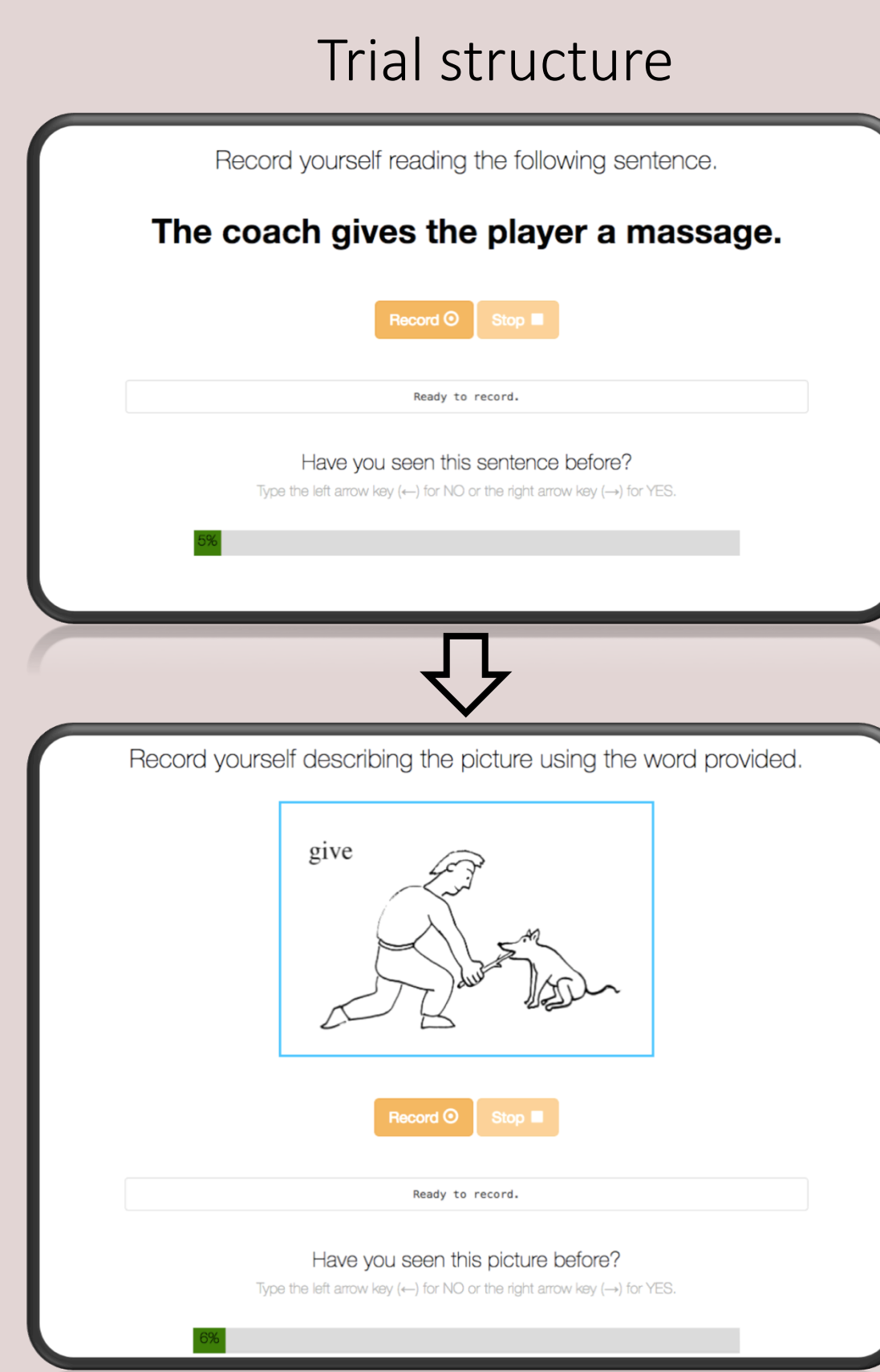
? How to isolate thematic roles, all else equal?

	SYNTAX	SEMANTICS	MATCH?
Fully transparent:	A gives B a flower / gives a flower to B	A transfers C to B	Yes
Semi-idiomatic:	A gives B a compliment / gives a compliment to B	A compliments B	No
Idiomatic:	A gives B the boot / gives the ax to B	A fires B	No

- **Insight**: FullTs/Semis/Idioms as primes, FullTs as targets
 - Snider & Arnon (2012): Idioms prime FullTs, but low power to detect differences (N=35)

2. Methods

- **Picture description task** on MTurk (N=192; age range=18-67)
 - Pictures: concrete ditransitive events (à la Bock & Loebell, 1990)
 - IVs: 1. Prime Construction (FullT/Semi/Idiom; b/t-subjects)
2. Prime Form (DO/PO; w/in-subjects)
 - DV: proportion of DO productions, over all dative productions
 - Task: 1. P(participant) reads **prime sentence**
2. P describes **target picture**
 - Cover story: “Have you seen this sentence/picture before?”
- **Predictions**
 - **Syntax-only**: equivalent priming for FullT/Semi/Idiom
 - **Syntax+semantics**: stronger priming for FullT vs. Semi/Idiom



3. Results

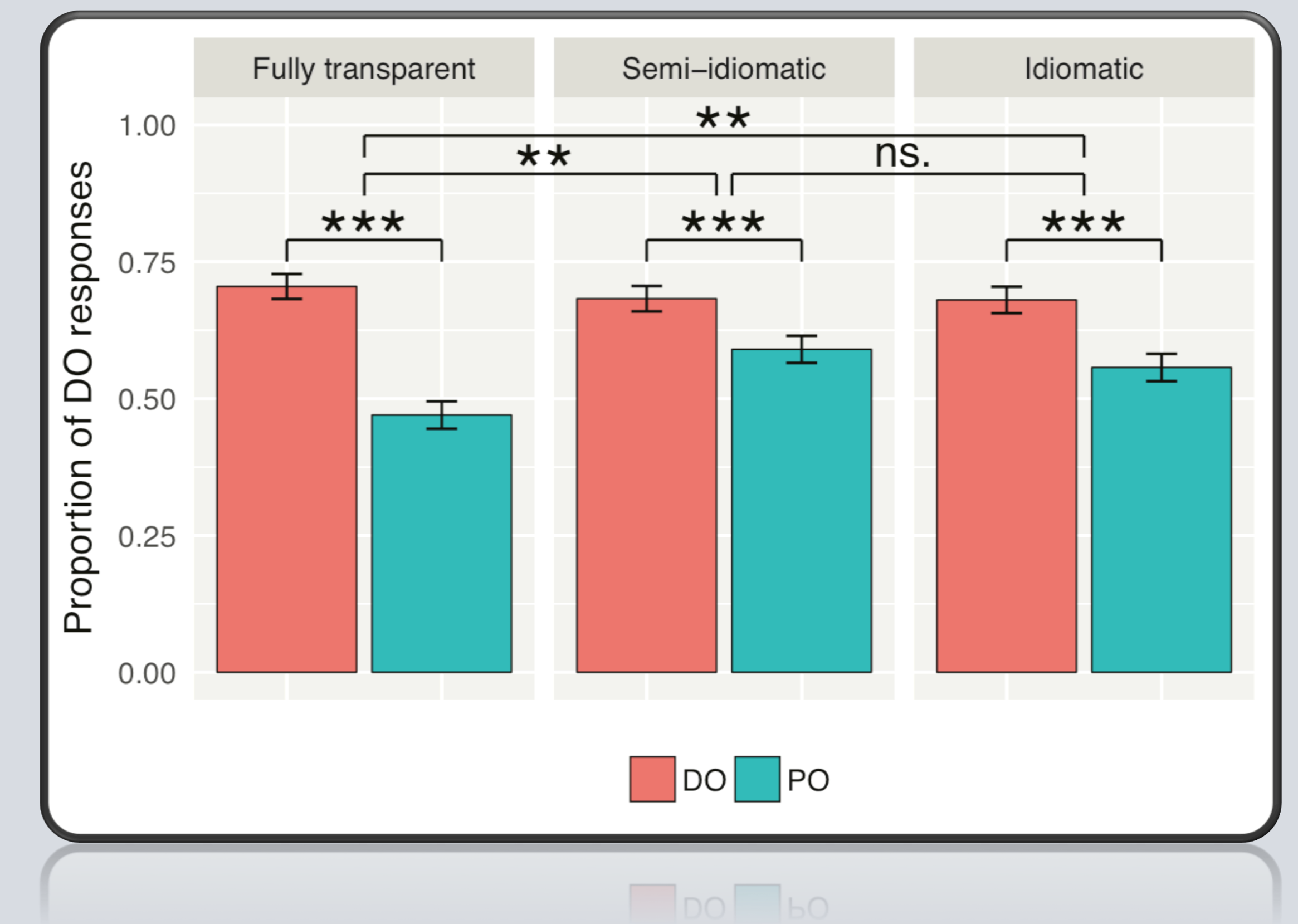
- Significant priming for all three construction types ($p < .001$)
- Increased priming for FullT vs. Semi/Idiom ($p = .001/.01$)
- But not for Semi vs. Idiom ($p = .47$)

Prime Construction	Priming (%)
Fully transparent	23
Semi-idiomatic	9
Idiomatic	12

Analysis

- Maximal logistic mixed-effects model in lme4

```
glmer(Priming ~ Prime Construction * Prime Form +  
(1|Participant) + (1 + Prime Form|Item), family=binomial,  
control = glmerControl(optimizer = "bobyqa"))
```



4. Discussion

- Thematic roles prime independently of syntactic structure (NP-NP vs. NP-PP), prepositional overlap (⊗ vs. “to”), and animacy (animate-inanimate vs. inanimate-animate)
 - Consistent with Bernolet, Coleman, & Hartsuiker’s (2014) “sense boost” to priming (concrete datives are better primes than abstract datives, on concrete dative targets)
 - **Storage vs. productivity?** Pockets of productivity for Semis (see Wittenberg, Jackendoff, Kuperberg, Paczynski, Snedeker, & Wiese, 2014)
 - Baseline priming for all three construction types (though unclear what locus is here)
- Implications for structural priming:
- “Everything primes” account (see Ziegler, Snedeker, & Wittenberg, to appear)
 - Challenge to disentangle all possible contributors for diagnosis of pure structures
- Implications for linguistic theory:
- **Separate representations** for syntax and semantics (e.g., Jackendoff, 2007)
 - Cannot be isomorphic in structure
 - **Internal syntactic structure** for Semis and Idioms (tentative) (e.g., Jackendoff, 2007)
 - **Syntax retained in memory better** when syntax and semantics align?