

# On the psychological reality of linguistic event structures

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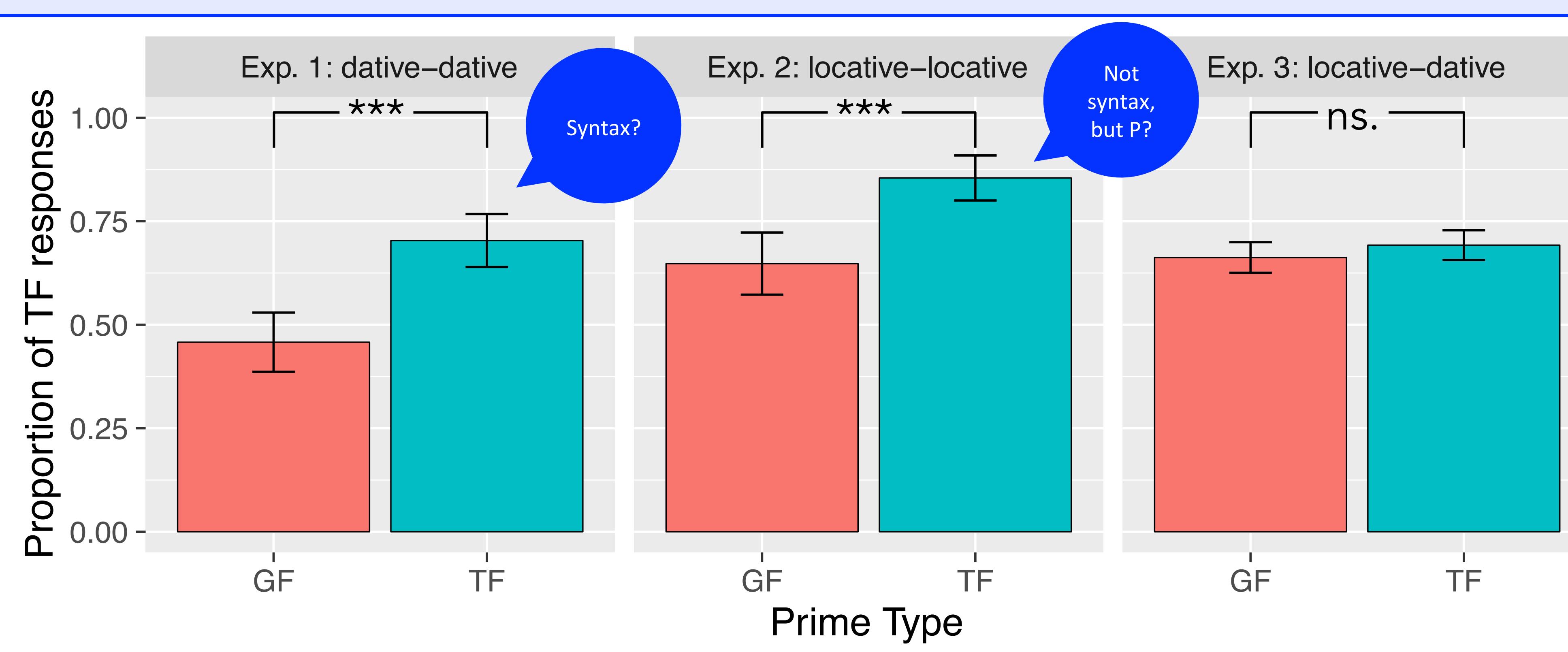
## 1. Introduction

- Structural priming: tendency to repeat aspects of structure across sentences (Bock, 1986)
- Most priming reducible to parallel surface syntax (though cf. Chang et al., 2003; for review, see Pickering & Ferreira, 2008)
- Can semantic structure also be primed? If so, at what level?
- Test case: DATIVES and LOCATIVES
  - boy brings camel keys* — =ditransitive
  - *girl loads van with boxes* =causative+with
  - boy brings keys to camel* *girl loads boxes in van* =to-variant/caused-motion
- At stake: degree of abstraction/generalization of semantic structure
  - Caused-motion primes to-variant → parallel structure (Jackendoff, 1983; Goldberg, 1995)
  - Lack of priming → appropriate grain size at level of individual event structures (Pinker, 1989; Rappaport Hovav & Levin, 2008; for review, see Levin & Rappaport Hovav, 2005)

## 2. Methods / Results

- Animation description task on MTurk (N=1,068; age range=18-69)
- Stimuli: EXP. N PRIMES TARGETS

1	52	datives	datives	=parallel structure
2 <sup>1</sup>	52	locatives	locatives	=parallel structure
3*	172	locatives	datives	=parallel structure?

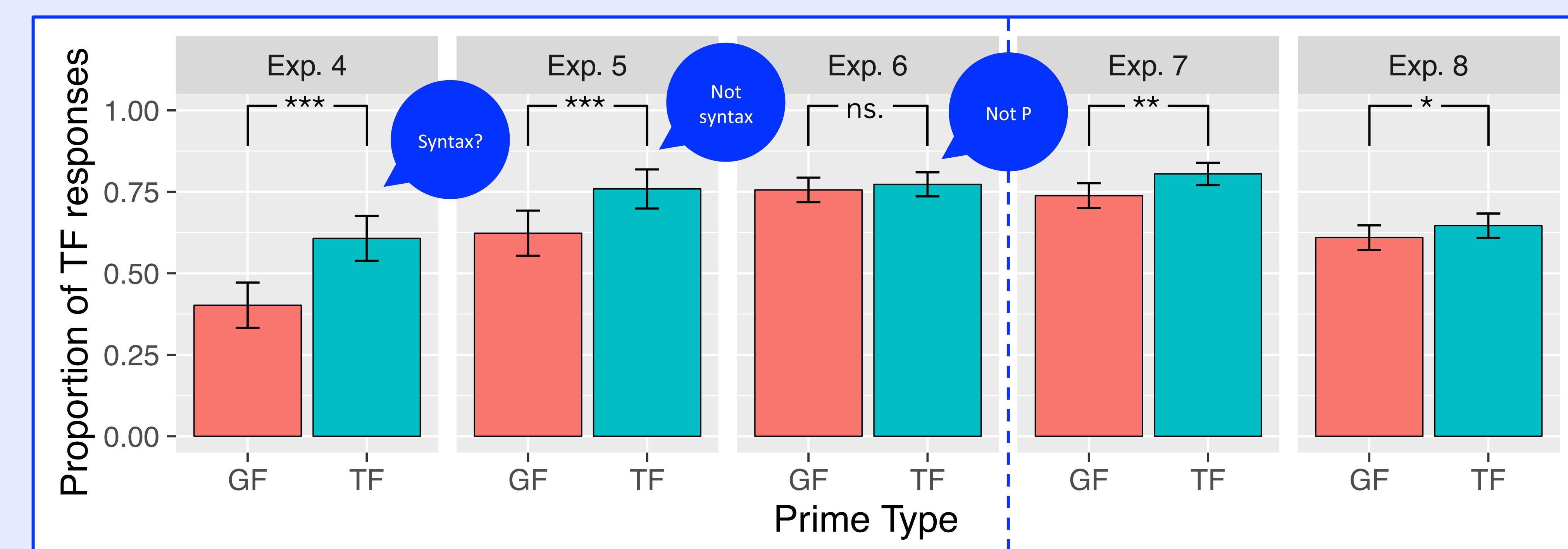


<sup>1</sup>Chang et al., 2003; \*Also run in reverse direction (N=172), with similar results

## 3. Validation

- No cross-structural priming in general? Prepositional mismatch? Reducible to animacy?
 

Stimuli	EXP.	N	PRIMES	TARGETS	
4 <sup>2</sup>	4 <sup>2</sup>	52	benefactives	datives	=parallel structure
5 <sup>2</sup>	5 <sup>2</sup>	52	provide-withs	datives	=parallel structure
6	6	172	provide-withs	locatives	=parallel structure?
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7 (~2)	7 (~2)	172	locatives	locatives	=parallel structure
				+animacy mismatch (animate location in primes, inanimate in targets)	
8 (~3)	8 (~3)	172	locatives	datives	=parallel structure?
				+animacy match (animate location, animate recipient)	



<sup>2</sup>Bock, 1989; Pappert & Pechmann, 2013; <sup>3</sup>Hare & Goldberg, 1999; Salamoura & Williams, 2007; Cho-Reyes et al., 2016

## 4. Discussion / Conclusions

### Event structures are psychologically real

1. Priming of individual event structures, independent of animacy (Bock et al., 1992; Carminati et al., 2008; Cho-Reyes et al., 2016)
2. No strong evidence for higher-level abstractions (though plausibly still there)

### Parallel animacy facilitates priming (Gámez & Vasilyeva, 2015)

1. Animacy changes inherent nature of event structural representations?
2. Animacy as truly orthogonal dimension, and priming instead sensitive to role filler properties? (Bock et al., 1992; Levin & Rappaport Hovav, 2005; cf. Branigan et al., 2008)