

# On the psychological reality of linguistic event structures

Jayden Ziegler ([ziegler@g.harvard.edu](mailto:ziegler@g.harvard.edu)), Jesse Snedeker • Harvard Psychology

## 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?

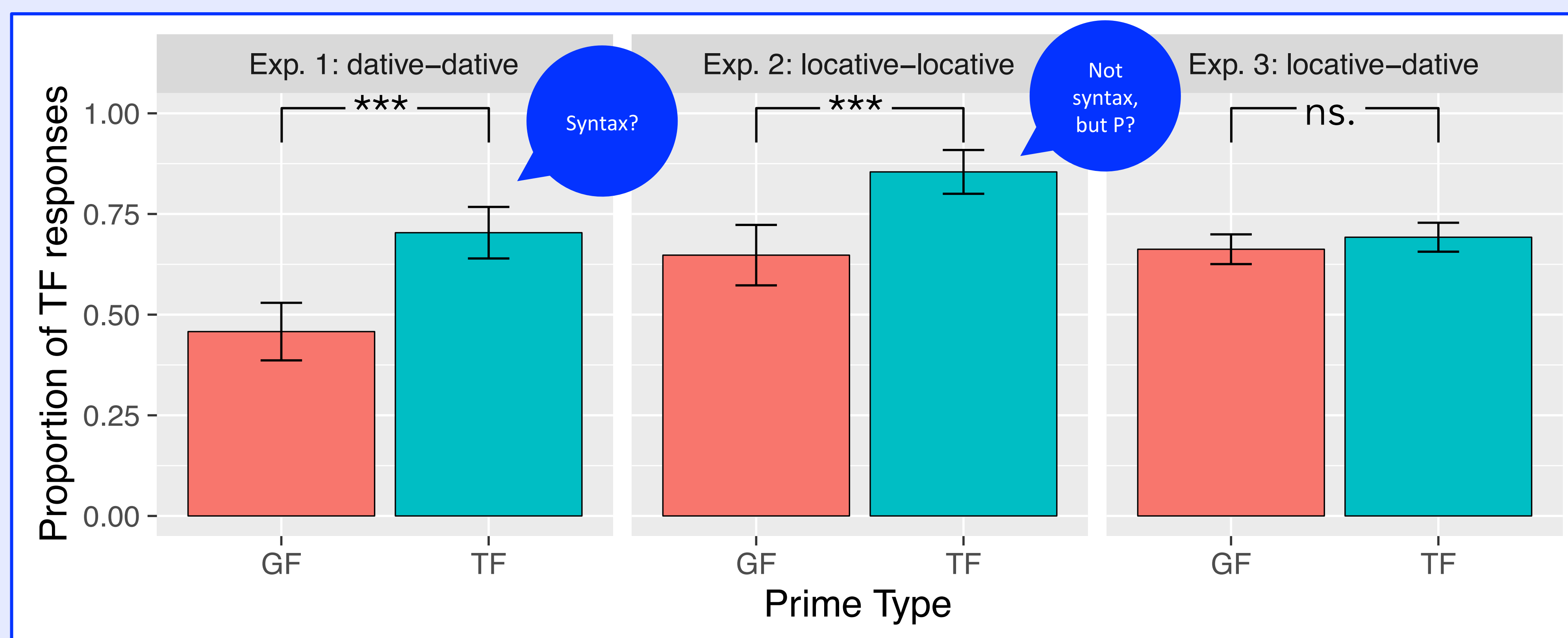
- **Test case:** DATIVES and LOCATIVES

<i>boy brings camel keys</i>	—	=ditransitive
—	<i>girl loads van with boxes</i>	=causative+with
<i>boy brings keys to camel</i>	<i>girl loads boxes in van</i>	=to-variant/caused-motion
- **At stake:** degree of abstraction/generalization of semantic structure
  1. Caused-motion primes to-variant → **parallel structure** (Jackendoff, 1983; Goldberg, 1995)
  2. 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>J</sup>	52	locatives	locatives	=parallel structure
	3*	172	locatives	datives	=parallel structure?

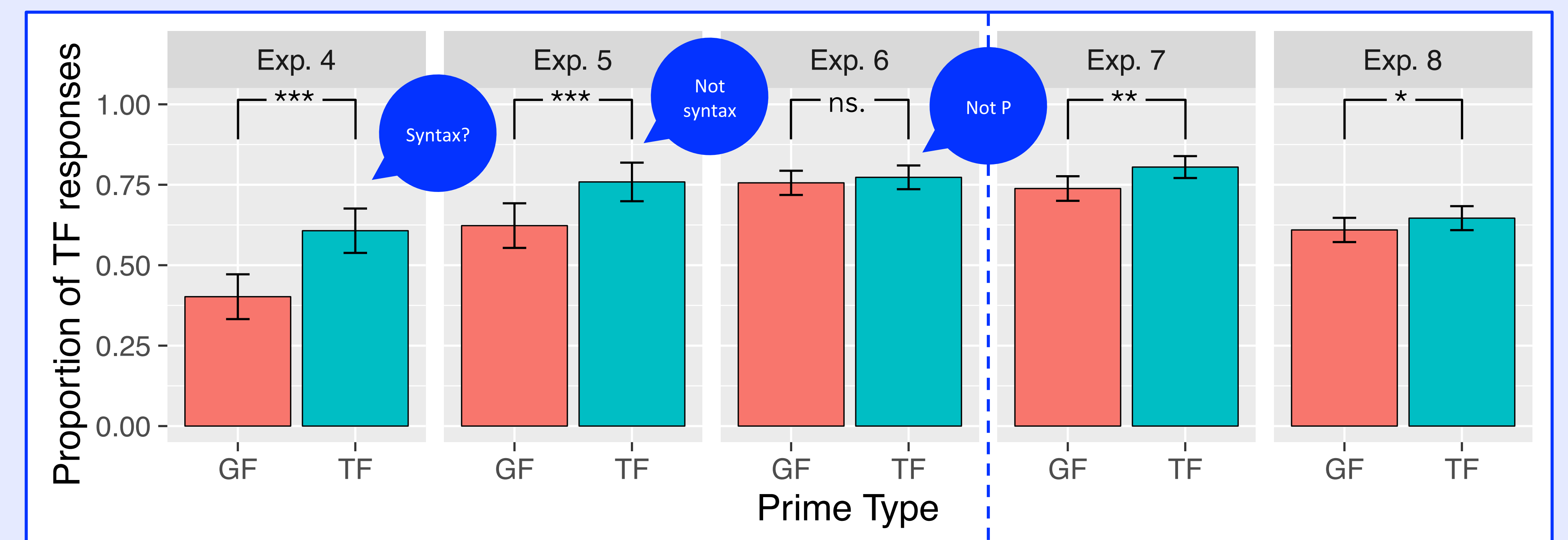


<sup>J</sup>Chang et al., 2003; \*Also run in reverse direction (N=172), with similar results

## 3. Validation

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

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



<sup>J</sup>Bock, 1989; Pappert & Pechmann, 2013; <sup>H</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)