

Can English Idioms Undergo the Dative Alternation? A Priming Investigation

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Theoretical Motivation. To date, though priming has been demonstrated to target syntax (Bock & Loebell, 1990; Pickering et al., 2002), priming experiments are equivocal to the level of structural representation targeted (Pickering & Ferreira, 2008). To better understand this issue, we examine competing syntactic representational hypotheses using priming and probe the level of abstract representation that priming targets. We use the English dative alternation as our test case, which has two structural options: Double Object (DO) and Prepositional Dative (PD). Idioms with verbs that should alternate are cited as being restricted to the DO (1a-1b; Richards, 2001). This restriction is often used as evidence to support theories in which the DO and PD are construed as categorically distinct (Harley, 1997; among others), and evidence against theories that analyse dative structures as derivationally related (Larson, 1988; among others); however, these same idioms appear to take on the PD form when the sentence involves heavy NP shift (1c). Bresnan and Nikitina (2007) take idioms in the PD form as evidence for derivational and probabilistic theories of the dative alternation. There is debate, however, about whether idioms like (1c) are truly PDs. An alternative hypothesis is that (1c) is a type of DO that has undergone *Rightward Dative Shift* (Figure 1; Bruening, 2010). Crucially, this construction is structurally a DO, but with the thematic goal projected to the right. This results in a surface order akin to the PD. The potential mismatch between surface word order and abstract structure makes idioms like (1c) a useful test case with which to understand whether priming targets a more abstract level of syntactic structure.

Current Experiment. To determine the structural representation of idioms like (1c) and investigate the depth of syntax that priming targets, we conducted a two-alternative forced-choice priming experiment. Primes were displayed in one of four conditions: Prepositional Dative, Double Object, Rightward Dative Shift, and a Control Condition (Table 1), and each trial included two test options: DO and PD. If idioms like (1c) are truly PD, then the results of the Rightward Dative Shift Condition should pattern like the results of the PD Condition. As such, if a Rightward Dative Shift prime (1c) results in fewer PD responses than a PD prime, idiomatic sentences in this form are not likely to have a PD structure. Our results suggest that these idioms are not structurally similar to PD, and thus cannot entirely undergo the dative alternation.

Methods. Native English-speaking participants ($n=40$) completed 144 trials. In each trial, they were shown a sentential prime, followed by a forced-choice picture description task. We created four lists in a Latin Square design. In each trial, participants read the prime aloud, then chose which of two sentences better described a drawing. Test sentences were presented in the lower portion of the screen, differed only in structure, and were counter-balanced for side of presentation. 48 trials tested the dative alternation, and 96 filler trials tested active/passive priming. Trials testing active/passive priming were included to ensure that the task was effective.

Results. Results were submitted to a linear mixed effects model with a logistic regression function (Jaeger 2008), including a fixed effect of condition, and a maximal random effects structure. Significant priming effects were found in the active/passive condition, ($\Delta=19\%$ between Active and Passive conditions), confirming task validity. Test trials after PD primes resulted in significantly more PD responses than after DO ($\Delta=8\%$, $\beta=0.36$, $SE=0.14$, $z=2.58$, $p<0.01$) or Control primes ($\Delta=6\%$, $\beta=-0.29$, $SE=0.14$, $z=-1.99$, $p<0.05$), see Figure 2. There was no difference between the Rightward Dative Shift condition and any other prime condition.

Implications. In our experiment, the PD response rate following a Rightward Dative Shift prime is not different from a PD prime; however, unlike PD primes, it is also not different from a DO prime. These results point to many influences in syntactic priming, including perhaps lexical overlap of *to* in both the Rightward Dative Shift and PD Conditions (Pickering & Branigan, 1998), and potential differences in semantics between conditions. If these idioms were truly PD, however, the rate of PD responses in the Rightward Dative Shift Condition should be different from the DO Condition. This suggests that, though it is unclear whether the structure in Figure 1 is responsible, idioms like (1c) are not true PD structures (cf. Bresnan & Nikitina 2007), which ultimately lends some support to theories which construe the dative alternation as distinct

structures, and interestingly suggests that syntactic priming may be sensitive to a more abstract level of structure.

References

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Examples and Figures

- (1) a. The lighting here gives me a headache.
 - b. *The lighting here gives a headache to me.
 - c. The lighting here gives a headache to everyone in the room.
- (Bresnan & Nikitina 2007)

Figure 1

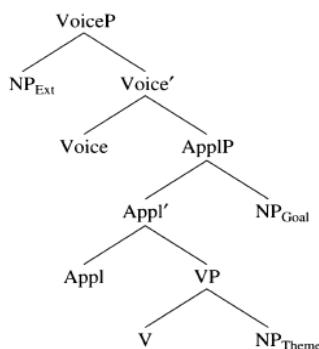


Table 1


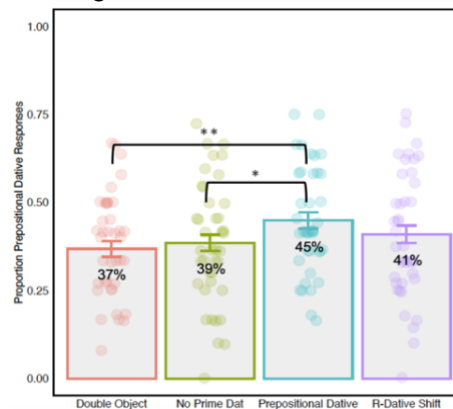
Prime Condition	Example Prime	Test Trial
Double Object	The conductor gave the quiet girl on the evening train the ticket	 <p>The man gave The man gave a</p>
Prepositional Dative	The conductor gave the ticket to the quiet girl on the evening train	
Rightward Dative Shift	The conductor gave the creeps to the quiet girl on the evening train	
Control	Fully flowery and intricately patterned	

Figure 2



		the child a cookie. cookie to the child.
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