

Syntactic Priming Across Constructions: Light Verbs

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An enduring challenge in psycholinguistics is modeling the relationship between storage and computation of multiword expressions in the mental lexicon. While there has been considerable research on noncompositional idioms and fully compositional sentences, less is known about phenomena between these two extremes. One such phenomenon is light verb constructions (LVCs). Compare a truly compositional sentence like “Jan gives Elsa a rose” to an LVC like “Jan gives Elsa a kiss”. Whereas in the non-light sentence, Jan is the Theme, Elsa is the Recipient and the rose is the Theme, in the LVC the semantic roles are different: Jan is the “kisser”, and thus the Agent of kissing, Elsa is the person kissed, and the kiss is part of the complex predicate. “Kiss” is assigning semantic roles itself, and is not a typical Theme like “rose”.

One theoretical approach to LVCs is to list each construction as a unit in the lexicon, with its idiosyncratic syntax and semantics [1]. Another approach presumes that there are lexical features on the verb that make it “light” if it combines with an abstract noun. Thus, the syntactic structures of light and non-light sentences are the same, and only the semantic roles differ [2; 3].

We used structural priming to disambiguate between the two models, testing if the word order of non-light ditransitive constructions was primed by LVCs in addition to non-LVCs. If there is shared structure between light and non-light constructions, then their priming behavior should not differ. But if LVCs are stored separately, LVCs should prime less than non-LVCs.

METHODS: Twenty participants read out loud prime sentences that were either light or non-light and either employed Double Object word order (DO, “Jan gives Elsa a kiss/rose”) or Prepositional Object word order (PO, “Jan gives a kiss/rose to Elsa”). Light vs. non-light construction type was manipulated between subjects. After each prime sentence, their task was to describe a picture that represented a non-light ditransitive scene. There were 28 sets of items, divided into four lists and counterbalanced across subjects. Each list also contained 150 fillers. To disguise the purpose of the experiment, a distractor memory task was used, following Bock & Loebell’s (1990) study [4].

RESULTS: Our dependent measure was the percentage of DO constructions produced on target trials, out of all DO and PO constructions. Both light and non-light DO primes resulted in more DO targets compared to PO primes (Figure 1), with a robust main effect of prime type ($F(1,54)=30.18, p=.000$) that was reliable for both the Light and the Nonlight sentence type (Light: $F(1,54)=14.14, p=.000$, Nonlight: $F(1,54)=8.37, p=.005$). There was no reliable interaction between sentence type and prime type ($F(1,54)=.57, p=.451$).

CONCLUSIONS: The results indicate that even though the argument structures of LVCs and non-light sentences differ dramatically, they both prime non-light targets equally, suggesting complete overlap of the structure that is sensitive to priming. To the extent that production priming reflects surface syntax [5, 6, 7], we can confirm that these structures share the same syntactic structure.

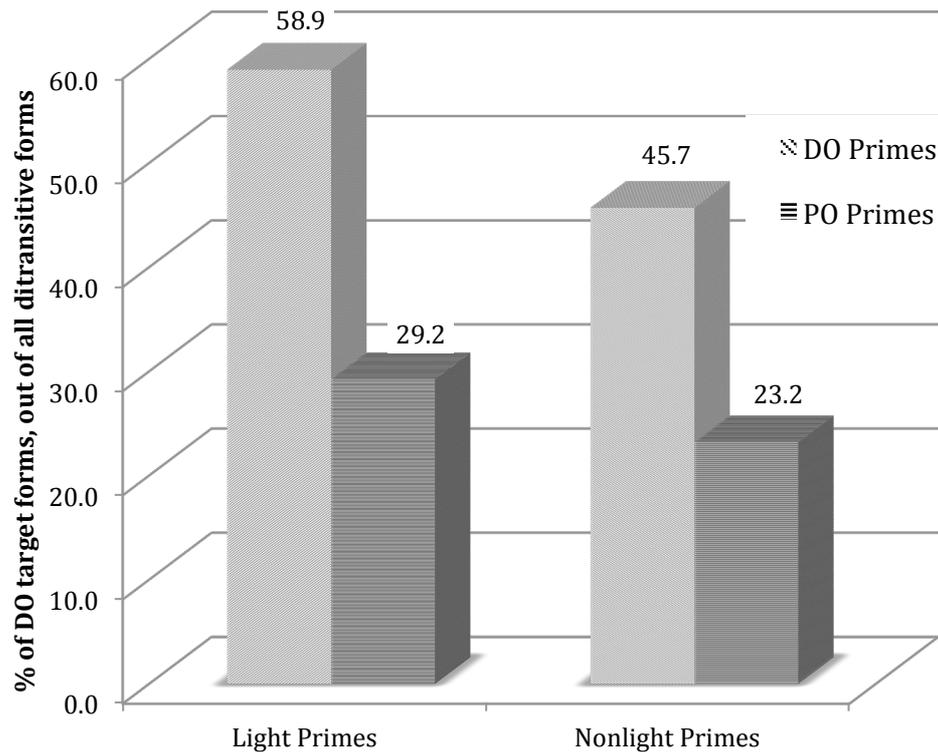


Figure 1. *Percentage of DO answers out of all ditransitive answers to Light Primes (left group) and Nonlight Primes (right group).*

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